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**ORIGINAL ARTICLES**

PRIMARY LUNG TUMORS.....547
Ralph Adams, M.D., Boston.

HYPOGLYCEMIC FATIGUE .....553
Major Samuel C. Karlan and Capt. Clarence Cohn, M. C., A. U. S.

PENICILLIN IN AGRANULOCYTOSIS.556
Major Edward W. Boland, Capt. Nathan E. Headley and Col. Philip S. Hench, M. C., A. U. S.

TEACHING OF DRUG THERAPY.....559
Austin Smith, M.D., Chicago.

PENICILLIN FOR ULCERS OF LEG....563
Ruben Nomland, M.D., and Evelyn G. Wallace, M.D., Iowa City.

EFFECT OF TRIDIONE IN CONTROL OF PSYCHOMOTOR ATTACKS.....565
Russell N. DeJong, M.D., Ann Arbor, Mich.

RUBELLA IN PREGNANCY.....568
Max J. Fox, M.D., and Mortimer M. Bortin, M.D., Milwaukee.

**CLINICAL NOTES**

SUBSIDENCE OF SCLERODERMA.....570
Eugene T. Bernstein, M.D., and Lewis A. Goldberger, M.D., New York.

PAIN IN PEPTIC ULCER.....570
Arnold H. Kadish, M.D., and Andrew B. Rivers, M.D., Rochester, Minn.

**COUNCIL REPORTS**

New and Nonofficial Remedies.....571

**EDITORIALS AND COMMENTS**

Treatment of Shock from Cold.....572
Amyotonia Congenita.....573
Immunologic Diet.....573
Congenital Defects After Rubella.....574
Hearings on S. 1606 Scheduled.....575
Temporary Approval of Residencies....575
Hypersensitivity Rheumatic Fever.....575
Continuation Courses.....575

**MEDICINE AND THE WAR**

Navy .....576
Navy Awards and Commendations.....576
America Typhus Commission Awards...577
Physicians Separated From Service.....578

**ORGANIZATION SECTION**

Washington Letter.....585
Temporary Approval of Residencies....585
Radio Broadcasts.....586
Council on Medical Service.....586
Medical Legislation.....587
Coming Medical Meetings.....588

**REGULAR DEPARTMENTS**

Medical News.....589
Deaths .....593
Foreign Letters:
London .....596
Belgium .....597
Moscow .....597
Brazil .....598
Marriages .....598
Correspondence .....599
Bureau of Investigation.....600
Medicolegal Abstracts.....601
Medical Examinations and Licensure...601
Postgraduate Continuation Courses....602
Current Medical Literature.....604
Book Notices.....612
Queries and Minor Notes.....613
Tonics and Sedatives.....Adv. Page 38
Books Received.....Adv. Page 62

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# PRIMARY LUNG TUMORS

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Boston

Except for 1 instance of myxochondroma and 6 cases of bronchial adenoma, this report is concerned with primary carcinoma of the lung. A diagnosis of primary carcinoma of the lung was established microscopically in 157 consecutive cases at the Lahey Clinic in the fifteen year period ended Dec. 31, 1944. The material here presented is selected only on a basis of microscopic examination because it is the only standard of reference which avoids confusion and limits controversy. A clinical diagnosis of carcinoma of the lung was made 199 times during the same period. Most of these clinical diagnoses can be accepted as accurate beyond a reasonable doubt. Terminal cases, cases judged inoperable on the basis of roentgenologic evidence and cases in which diagnostic measures failed to yield a positive pathologic report constitute the unproved portion of this group. The total figures showing 157 cases microscopically confirmed to 199 clinically diagnosed give a ratio of 1 : 1.26, or 78.9 per cent. Determination of the ratio for each year separately demonstrates that there has been little variation in the tendency to pursue the diagnosis to a morphologic answer.

Examination of the cancer statistics can best follow the line of analysis that has proved worth while with cancer of other organs, that is, on the basis of histogenesis. The way has been well marked by investigations of cancer of the rectum, cervix and breast. The problem in cancer of the lung differs only in that figures for arrest of disease must await the passage of another fifteen years. In the developmental period of pulmonary resection for cancer, lasting approximately from 1933 to 1940, the question of survival rate was partially obscured by the considerable mortality attendant on unperfected technical management, limited experience and the well remembered sequelae of bronchial leakage, pleural infection, atelectasis, chest wall mutilation and physiologic invalidism. The last four years bear witness to the practical disappearance of these complications, and, to a much larger extent, length of survival can be determined solely in terms of whether the cancer was eradicated or recurred.

Meanwhile, correlations were sought which are helpful to the solution of the problems at hand. A study of these cases presents nothing new or startling, but from it the following data have emerged.

The frequency of cancer of the lung, compared with all other cancer, is between 6 and 8 per cent. Age susceptibility is greatest between 40 and 50 years and, as indicated in table 1, the incidence follows the age incidence of malignant disease in general. The lesion was on the right side in 87 and on the left side in 70 cases.

There was a male preponderance of 128 to 29, or 81.5 per cent. Variations in the subgroups are of interest. One third of the cases of adenocarcinoma occurred in women, while either epidermoid cancer or the highly malignant oat cell cancer would appear to be almost exclusively a disease of the male.

Necropsy established the diagnosis in 5 cases (3.2 per cent), indicating need for even greater efforts to make an antemortem diagnosis (table 2). Particular attention is called to the 2 cases of metastatic carcinoma of the brain for which craniotomy was performed under the erroneous diagnosis of primary brain tumor. They give point to the facts that predominating signs and symptoms of brain tumor may obscure the underlying diagnosis of pulmonary carcinoma and that roentgenograms of the chest might wisely be included in the clinical investigation of every patient suspected of harboring a brain tumor. Adenocarcinoma of the lung is especially likely to be followed by cerebral metastases and yet in the lung is frequently "silent" because of peripheral location.

## SYMPTOMATOLOGY AND DIAGNOSIS

Analysis of the symptomatology of 63 cases, found inoperable at the time diagnosis was made, shows by hindsight that a warning sign was given early in nearly all of these cases. Lack of early diagnosis was caused most often by failure of the patient to seek medical advice or by failure of the physician to consider seriously the complaint and to undertake proper diagnostic measures. The symptomatology of cancer of the lung is largely explained by bronchial encroachment, with varying degrees of obstruction or ulceration in that structure.

One hundred and forty-six patients (93 per cent) exhibited a cough, typically the first symptom, initially dry but soon productive of thin mucoid and later purulent sputum. Pain, or chest discomfort, was the second most common symptom, a complaint recorded for 85 (54 per cent) of these 157 cases. Its severity varied from a sensation of tightness in the chest to that of mild substernal oppression in intrabronchial lesions, through the many grades of pleurisy in cases of pleural involvement on to the terrible intractability associated with extension to the superior pulmonary sulcus and invasion of the brachial plexus. Sputum was present in 83 cases (53 per cent). It was only mucoid in 44, and these were the earlier cases, mostly, in which increased bronchial secretion caused by the cancer remained uninfected. It was purulent in 39 cases, indicating the presence of bronchial obstruction or secondary infection.

From the Department of Surgery, the Lahey Clinic.

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Ulceration of the bronchial mucosa or tumor surface led to hemoptyses in 69 cases (44 per cent) in this series. The extent of bleeding varied from streaking or occasional spotting to actual hemorrhage. Hemoptysis of some degree every day over a period of time is one of the most positive symptoms of pulmonary carcinoma. Intermittent blood streaking is more commonly encountered, however, than is the former. One

TABLE 1.—*Distribution of Carcinoma of the Lung According to Age and Sex*

| Age, Years | Epidermoid M | Epidermoid F | Adenocarcinoma M | Adenocarcinoma F | Oat Cell M | Oat Cell F | Undifferentiated M | Undifferentiated F | Unclassified M | Unclassified F | Total M | Total F | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 20-29 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 30-39 | 1 | 2 | 2 | .. | .. | .. | .. | 1 | 1 | .. | 4 | 3 | 7 |
| 40-49 | 15 | 1 | 3 | 1 | 4 | .. | 3 | .. | 6 | 2 | 31 | 4 | 35 |
| 50-59 | 46 | 1 | 9 | .. | 1 | 1 | 7 | 4 | 9 | 5 | 72 | 11 | 83 |
| 60 up | 16 | 2 | 1 | 4 | 1 | .. | 3 | .. | .. | 5 | 21 | 11 | 32 |
| Subtotal... | 78 | 6 | 15 | 5 | 6 | 1 | 13 | 5 | 16 | 12 | 128 | 29 | 157 |
| Total..... | 84 | | 20 | | 7 | | 18 | | 28 | | | | |
| Percentage | 53.5 | | 12.7 | | 4.4 | | 11.4 | | 17.8 | | 81.5 | 18.5 | 100 |

is impressed by the number of patients with this disease who readily admit cough, pain or sputum but at first deny "coughing up of blood." Yet many will confess blood streaked sputum on one or more occasions when specifically cross questioned as to this point. This observation is probably explained by psychologic attitudes rather than by intentional concealment. To the lay mind the cough may be self explained as a "cigaret cough" and the chest wall discomfort as an attack of "pleurisy," neither of which is considered "serious." Blood spitting, on the other hand, is recognized as a sign of "serious disease" such as tuberculosis or cancer and, if only minimal in amount or sporadic in occurrence, is likely to be forgotten.

Partial encroachment to the point of incomplete obstruction, with production of a wheeze, occurred in 22 cases (14 per cent). The fleeting nature of this symptom frequently allows it to escape detection, as it disappears when bronchial obstruction becomes complete. Demonstration of localized emphysema and a unilateral wheeze, as was possible in a few of these cases, practically establishes a diagnosis of bronchial obstruction. In the roentgenograms of 26 patients (16.5 per cent) the findings were those of a tumor mass. Peripheral collapse from obstruction sufficient to prevent aeration was observed in 63 cases (40 per cent). Collapse with associated bronchiectasis from blocked egress of secretions was found in 34 cases (22 per cent). Sixteen patients (10 per cent) had an abscess cavity in the collapsed lung tissue as a result of pulmonary suppuration distal to bronchial occlusion or to actual tumor necrosis. The roentgenologic appearance of an abscess caused by central necrosis of tumor tissue is sometimes quite diagnostic, the walls of the abscess being very thick. Instead of air above a fluid level, one often sees the shadow of an ovoid mass projecting upward into the area of rarefaction. Recurrent attacks of bronchitis, pneumonitis or so-called grip frequently appeared in the clinical picture, as a reaction to the infection almost invariably a sequel to bronchial obstruction.

The five most common symptoms of cancer of the lung encountered in this group of cases, therefore, were cough, pain, sputum, hemoptysis and wheeze (table 3).

The frequency of a sixth symptom, dyspnea, recorded in 27 cases (17 per cent) was regarded with surprise until correlated with the occurrence of pleural effusion (26 cases, or 16.5 per cent). Nearly always the fluid was bloody, and microscopic examination of the stained sediment revealed carcinoma cells in 5 instances (3 per cent). Pleural effusion usually is an indication of extension or metastasis and only rarely an early sign. Nerve involvement similarly is an indication of lateness in the disease, whether exhibited by the paradoxical diaphragm of phrenic paralysis, the hoarseness and aphonia of recurrent nerve invasion, Horner's syndrome of sympathetic chain interruption or pain of cancer encroaching on the nerves of the intercostal spaces or brachial plexus. Other presenting symptoms and signs of extension of metastasis, such as weight loss, weakness, palpable nodes or involvement of other organs, either may make obvious or help to obscure the primary diagnosis, but they are of small importance from the standpoint of early diagnosis and favorable results of therapy. They indicate a situation which has already become hopeless.

Beyond a careful history and physical examination, the methods of diagnosis available for more complete study include sputum examination, roentgenography, bronchoscopy, thoracentesis, biopsy of suspected nodal metastases, bronchography, pneumothorax, thoracoscopy and lung aspiration.

Sputum examination should always be done to exclude tuberculosis. In this series of cases study of the sputum for carcinoma cells has been done only occasionally and with little enthusiasm and, perhaps in consequence, a positive diagnosis has been made by sputum examination in but 3 cases. The proper preparation of a specimen for microscopic examination is tedious and time consuming. The likelihood of any individual specimen containing cancer cells has been considered small. The possibility of error in interpretation of the many bizarre cells ordinarily found in sputum has limited confidence in the findings. However, there has been a recent resurgence of interest in sputum examination and, as a result of better technic and greater experience, better results may be obtainable.

TABLE 2.—*Diagnosis of Carcinoma of the Lung Established Only at Necropsy*

| Case | Type | Clinical Diagnosis | Reason for Failure to Make Clinical Diagnosis |
|---|---|---|---|
| 1 | Epidermoid | Carcinoma, ? primary source | Moribund on admission; diagnosis suggested by roentgenogram; age 30+, 1936 |
| 2 | Epidermoid | Myelogenous leukemia | Advanced leukemia; incidental carcinoma of right lung; age 60+, 1939 |
| 3 | Unclassified | Brain tumor | Brain tumor metastatic at craniotomy; no chest symptoms or roentgenograms; age 60+, 1941 |
| 4 | Epidermoid | Advanced carcinoma, ? primary source | Too ill for study; diagnosis suspected by roentgenogram; age 50+, 1942 |
| 5 | Oat cell | Brain tumor | Craniotomy; no chest symptoms or roentgenograms; neck nodes not palpated; age 40+, 1944 |

A diagnosis of primary lung cancer was made by roentgenography or stated as a positive suspicion in 152 cases (96.7 per cent) and it was missed in 2 (1.3 per cent); 3 patients (2 per cent) were not examined (table 4). The reasons for no roentgenologic examination are stated under cases 2, 3 and 5 in table 2. Each of the 2 frankly misdiagnosed cases was called tuberculosis until eventually corrected by examination of tissue obtained at thoracotomy in 1 instance and bronchoscopy in another.

The radiologic features suggestive of pulmonary carcinoma are the shadow of a central or peripheral tumor mass, localized expiratory emphysema, mediastinal shift with a large amount of emphysema causing shift away from the lesion occasionally but more often toward the side of the lesion because of bronchial obstruction and atelectasis, the signs of collapse, abnormal behavior of the diaphragm and signs of mediastinal and pleural infiltration. The value of careful fluoroscopy and lateral views, in addition to posteroanterior films, cannot be overemphasized as a part of the study of problems in chest diagnosis.

TABLE 3.—*Symptomatology in 157 Cases*

| | Cases | Per Cent |
|---|---|---|
| Cough | 146 | 93 |
| Pain | 85 | 54 |
| Sputum | 83 | 53 |
| Hemoptysis | 69 | 44 |
| Wheeze | 22 | 14 |

Bronchoscopy is a helpful confirmatory procedure for lesions lying near the hilus and encroaching on major bronchi. Analysis reveals that bronchoscopy was done in 122 cases (77.7 per cent), 109 (69.4 per cent) being positive and 13 (8.3 per cent) being negative. Bronchoscopy was not done in 35 cases (22.3 per cent). A positive diagnosis was thus obtained in 89.3 per cent of the 122 cases in which bronchoscopy was carried out (table 5).

Although bronchoscopy is a relatively simple and nonhazardous procedure, it should be used selectively on a basis of seasoned clinical judgment and not employed routinely. The characteristics as shown by roentgenograms are often of value in indicating the help that may be obtained by this procedure. Rarely was a tumor seen bronchoscopically when its shadow was circular on the roentgenogram. Tumors casting such shadows nearly always are peripheral and arise beyond the major bronchi, no matter how near the midline they may look on the posteroanterior film. A lateral roentgenogram will often delineate their peripheral position in respect to the hilus. Probably the reason for their roundness is that they lie far enough peripherally to encounter equal resistance from lung parenchyma on all sides. Even tumors with the point of origin in a primary bronchus may be overlooked if growth has been outward into the hilus instead of inward into the lumen. For these reasons the presence of some degree of bronchial obstruction is almost prerequisite to diagnostic success with the bronchoscope. Of the 13 cases in which bronchoscopy was negative there were peripheral tumors in 7, an upper lobe lesion was present in 1 and in 5 cases there was no bronchial obstruction.

Suspicion of carcinoma of the lung is not in itself an indication for bronchoscopy, and many legitimate reasons exist for its omission, just as there are definite indications for its performance. Among the reasons for omission are biopsy of metastases (15 instances), advanced state of disease (8), clinical evidence sufficient for operation without it (6), a missed diagnosis clinically (3), carcinoma cells in aspirated fluid (2) and the patient's refusal (1).

Pleural effusion, as occurred in 26 cases (16.5 per cent), may be aspirated and centrifuged and the sediment stained and searched for carcinoma cells. Such cells were found in 5 instances. The thoracoscope, in conjunction with preliminary pneumothorax, is a helpful adjunct at times. Usually, if decision regarding operability cannot be made short of intrapleural visualization, open thoracotomy is believed preferable. The addition of pneumothorax alone, followed by roentgen examination, occasionally gives the required information concerning nodulation of the pleura or masses in the mediastinum. Lung aspiration with a punch biopsy needle is applicable only in the case of a peripherally placed tumor. In the few instances used, it has not led to any complications. However, hemorrhage, infection and outgrowth of a tumor along the needle tract are potential complications with this procedure which cannot be lightly disregarded. Only rarely does one require confirmation by lipiodol injection of localized bronchiectasis beyond a tumor, and much care should be exercised in its use. If the oil should be trapped by the tumor, pneumonitis will be accentuated. Experience with bronchiectasis has indicated the wisdom of waiting several weeks after bronchography before performing lobectomy to avoid the increased incidence of postoperative atelectasis which otherwise may occur. Such a time lag is unjustifiable in the treatment of carcinoma. Except in special cases, bronchography is best omitted from study of carcinoma of the lung.

Biopsy of palpable supraclavicular or axillary nodes or other metastases permitted microscopic confirmation of the diagnosis in 26 instances (16.5 per cent). The axillas and especially the supraclavicular fossae should be examined with particular care and any palpable node submitted to biopsy. Nodes lying deeply beneath the medial end of the clavicle are among the earliest involved and are very likely to escape detection unless deliberately searched for.

### NONMALIGNANT TUMORS

The symptomatology and diagnostic features of the group of 7 nonmalignant tumor cases are very similar to those of the cancer series. One occurred in the third, 3 in the fourth and 3 in the fifth decade. All 7 patients were women. The lesion was on the right side in 4 and on the left side in 3 cases. All were microscopically confirmed. Five patients had a cough. Three had some chest pain or discomfort. Five had hemoptysis. Two had a wheeze. Two had mucoid sputum, and in the remaining 5 the sputum later became purulent. By roentgenograms 1 had combined signs of collapse and effusion. Four had collapse and bronchiectasis. In 1 the shadow of a tumor was visible. One had respiratory mediastinal shift and localized emphysema. The diagnosis of tumor was suggested by roentgen examination in all the cases.

TABLE 4.—*Roentgenologic Examination in 157 Cases*

| | Cases | Per Cent |
|---|---|---|
| Diagnosis suggested | 152 | 96.7 |
| Diagnosis missed | 2 | 1.3 |
| Not examined | 3 | 2.0 |

TABLE 5.—*Bronchoscopic Examination of 157 Cases*

| | Cases | Per Cent |
|---|---|---|
| Positive | 109 | 69.4 |
| Negative | 13 | 8.3 |
| Total examined | 122 | 77.7 |
| Not examined | 35 | 22.3 |

Bronchoscopy was positive in 5, in 1 the tumor was frankly missed and in 1 resection was justified without bronchoscopy. Bronchoscopic removal sufficed in 2.

Five required pneumonectomy. All 7 patients are living and well from 1933, 1934, 1935, 1936, 1941, 1942 and 1943 respectively.

Certain differences in these cases are noteworthy. Four had a history of at least two years' duration when first seen. General signs of morbidity were less than expected in carcinoma after similar duration. Five of the 7 patients had frequent small hemoptyses. The lung of at least 2 was functionally destroyed, and yet the patients looked fairly healthy and gave histories more consistent with chronic hemorrhagic bronchiectasis than with advanced carcinoma. The striking difference, however, is found in the results of treatment, to be discussed later.

### TREATMENT

Efforts to control satisfactorily or to arrest advanced and inoperable carcinoma of the lung have been almost completely unsuccessful. Roentgen therapy has been abandoned as a curative measure. The palliation afforded is limited by the established radioresistance of this type of cancer. Temporary benefit has been obtained in several cases of the oat cell, high grade epidermoid and undifferentiated types. Noticeable reduction in the rate of fluid secretion in certain cases of pleural effusion has been observed, but rarely has the palliation lasted for more than six months. Radium has shown no advantage over x-rays, and technical considerations in its application make roentgen therapy distinctly preferable to radium.

TABLE 6.—*Results in 157 Proved Cases (100 per Cent)*

| | | | |
|---|---|---|---|
| Resected patients, proved | | | 49 (31.2%) |
| Living and well | 14 | (8.9%) | |
| Living with recurrence | 4 | (2.5%) | |
| Death later | 23 | (14.6%) | |
| Hospital death | 8 | (5.1%) | |
| Nonresected patients, proved | | | 108 (68.7%) |
| Proved but inoperable | 63 | (40.1%) | |
| Proved but thoracotomy only | 45 | (28.6%) | |

The percentage of inoperability at the time of diagnosis is discouraging. Sixty-three (40 per cent) of this group (table 6) were considered inoperable when first seen, 59 because extension or metastasis had occurred, and 4 for other reasons. These were advanced age and poor general condition, high grade of malignancy, failure to make a clinical diagnosis, and the patient's refusal. No patient was refused operation on the basis of age alone, however. The oldest patient was 72 at the time of pneumonectomy and is still working in his office a few hours daily at age 76, four years later.

Proof of extension was established in all the cases so classified, whether by symptoms and signs, biopsy of metastases or other tests. Careful examination of the visual fields of patients complaining of recent headache has been a helpful measure. Here should be emphasized the importance of perimetry with a 1 mm. object, rather than the gross finger tests often employed, to detect possible homonymous hemianopsia, nicking of the macula or other signs of cerebral metastasis.

Ninety-four cases (60 per cent) were thought operable before the thorax was opened. Liberal interpretation of operability early in the surgical study of this disease caused thoracotomy to be done in many cases that now would be recognized as inoperable on the basis of a larger experience. Part of this experience is accented by the sad immediate results of attempting to remove disease which had extended beyond the boundary line that separates the impracticable from the surgically feasible. Thoracotomy should be done in cases believed by preliminary study to be free from blood stream dissemination, direct extension into the mediastinum or pleura, implantation of cells on the pleural surface, or mediastinal nodes demonstrable by roentgenography.

Criteria of operability at thoracotomy include three of the foregoing requirements, because at this time implantation, direct extension or massive lymphatic invasion of the mediastinal nodes can be determined with greater accuracy. Forty-four patients (28 per cent) had thoracotomy only. One patient (0.6 per cent) had local excision of carcinomatous tissue invading the thoracic inlet in an unsuccessful effort to reduce pain. Nine patients died before leaving the hospital and 36 are dead or in terminal stages of the disease.

Removal of malignant disease by pulmonary resection was attempted in 49 cases, or 31.2 per cent (table 6). The type of resection to be done requires consideration of the problem of lymph node involvement, which is a disputed question. Probably the situation is similar to that of cancer of the breast, which is well understood. Any nodal involvement, as in the axilla, is a sign of grave import, but a radical mastectomy is done because some cures will result, although not as many as if the breast had been removed before any axillary metastases existed. The involvement of the supraclavicular nodes in breast cancer, however, is recognized as evidence of extension beyond the practicable range of surgery. Similarly in the lung, regional extension to the hilar nodes leaves a chance for cure by extirpation, while involvement of nodes extending upward along the mediastinum probably should place such a case in the group beyond surgical cure.

The complexity of the mediastinal lymphatic arrangement, the difference in mortality between total versus partial excision and the eventual work capacity that may be anticipated for the patient are factors favoring limited resection. On the other hand, the cancer-surgery ideal of total removal of the involved organ and mass removal of all regional lymph nodes, together with realization that early and rapid invasion of lymphatics may occur, suggests that lobectomy, the theoretical counterpart of simple mastectomy, should be less favorable than pneumonectomy. Increasing experience has demonstrated practically, however, the limited extent to which the analogy can be applied in the problem of lung cancer.

Technically speaking, pneumonectomy is not infrequently an easier procedure than lobectomy for the surgeon, but it is much harder on the patient. In this series of 49 resections there were 10 lobectomies with no hospital deaths and 39 pneumonectomies with 8 hospital deaths (20.5 per cent). To be sure, the latter figure has greatly improved since 1941. In this period there were 30 resections for carcinoma, 6 being lobectomy and 24 being pneumonectomy, with 1 hospital death (3.3 per cent). Since there was no death following lobectomy, the hospital mortality during the last four years in terms of pneumonectomy alone was 4.2 per cent. The 1 death occurred on the eighteenth postoperative day from cardiac tamponade secondary to pleural effusion and might well have been prevented by judicious use of a thoracentesis needle.

Carcinoma of the lower lobe of the lung which appears possibly curable will usually require pneumonectomy in order to excise the regional lymph nodes which characteristically extend upward along the primary bronchus and into the hilus. In upper lobe lesions the situation is somewhat different, since the lymphatic course is

superior to the primary bronchus and directed toward the azygos lymph node. By upper lobectomy under these circumstances it has been possible in 4 instances to remove fully as much cancerous tissue as would have been removed by pneumonectomy. Two were palliative procedures to alleviate symptoms from sequestrating masses. One patient died within four months and 1 within one year. Two procedures were designed to remove malignant disease, and the middle lobe was also resected, as it nearly always should be because of the poorly defined fissure between the upper and middle lobes. These 2 patients are living and well for more than two years and more than three years respectively. In 6 cases a lower lobectomy was done (including the right middle lobe in 2 instances) because of peripheral location of the tumor and absence of nodal involvement in 4, and only because of emphysema and poor general condition in 2. The latter 2 patients died in five months and nine months respectively of metastatic disease. Of the other 4, 1 patient died one and a half and 1 five years later, and 2 patients are living and well four years later. Five of these 6 cases involved the right lower lobe and 1 the left lower lobe. The results of these 10 lobectomy cases are given in detail in support of a belief that, in certain carefully selected cases the retention of one lobe may be permissible without sacrificing the chances for cure, with an appreciable prevention of hospital deaths and considerable preservation of functional reserve. Of the 10 patients, 1 lived one and a half years, 1 five years, and 4 are still alive and well two years, three years, four years and four years after operation. It may be noted that this salvage rate is at least equivalent to the combined salvage with pneumonectomy included. Lobectomy, then, may be advisable for purely palliative reasons, for occasional cases of peripheral lesions with no nodal involvement arising in the lower lobe and for upper lobe lesions when the absence of infection allows removal, by mediastinal dissection, of the azygos lymph node and adjacent node-bearing tissue.

Further analysis of the 49 patients submitted to resection (31.2 per cent of 157) discloses that 8 died in the hospital (5.1 per cent), as previously stated (table 6). Twenty-three patients have died since leaving the hospital (14.6 per cent). Ten died within a year, 4 lived between one and two years, 2 lived between two and three years, and 1 lived just over five years. Four patients are living with evidence of recurrence (2.5 per cent). One patient had recurrence within one year, 2 patients within two years and 1 patient within three years of operation. Fourteen patients are living and well with a chance for five year survival (8.9 per cent). Of these patients 6 have been well for more than one year, 2 for more than two years, 4 for more than three years, 1 for more than four years and 1 for more than nine years. The microscopic slides of all these surviving patients have been reviewed and the diagnosis of carcinoma reconfirmed, as a long survival arouses suspicion that the original diagnosis might really have been bronchial adenoma. The patient now surviving for nine years, for instance, had epidermoid carcinoma with at least 3 lymph nodes involved.

Comparison of these results with those obtained in the group of 7 nonmalignant tumors of the lung again illustrates how necessary it is that end results be reported only in terms of accurate pathologic diagnoses. Operation was done on 5 of these patients and all 5 are living and well, as are 2 additional patients requiring only bronchoscopic treatment. In other words, in this series of 164 primary lung tumors the survival rate of nonmalignant tumors is 100 per cent, compared with 8.9 per cent for the malignant group.

It is believed in this clinic that the nonmalignant tumors of the lung are different entities from carcinoma of the lung, and figures concerning them are distinctly separated from the cancer statistics. However, the data are of interest in themselves and add a striking background to a differential picture of nonmalignancy versus malignancy. Bronchial adenoma and myxochondroma of the lung represent only 4.2 per cent of the proved cases of lung tumor, but 9.2 per cent of resected tumors and 33.3 per cent of arrested cases. The technical procedure required for removal may be similar or identical, but the outlook is very different for the patient.

### CLASSIFICATION OF CARCINOMA

The pleomorphic nature of cancer of the lung has at times made difficult its subdivision into groups. Although the pathologic classification of carcinoma here followed of epidermoid, adeno-, oat cell, undifferentiated and unclassified carcinoma has been purely on the microscopic evidence, the clinical course, operability and results have so closely paralleled the independent pathologic grouping that they are worthy of note.

Eighty-four (53.5 per cent) of the group were epidermoid carcinoma in character. Twenty-three were inoperable. Twenty-nine were found to be nonresectable at exploratory thoracotomy. In 32 patients resection was done. Bronchoscopy was positive in 72, negative in 3 and not done in 9. Thirteeen of the 14 patients living and well are in this group. The longest survival to date is nine years. Clinically the disease tends to have a slower course and these patients have greater suffering from the sequelae of bronchial obstruction than those in the other groups.

TABLE 7.—*Carcinoma of the Lung in 157 Proved Cases Results in 49 Resections*

| | Cases | Per Cent |
|---|---|---|
| Resections | 49 | 100.0 |
| Hospital deaths | 8 | 16.3 |
| Deaths later | 23 | 46.9 |
| Living with recurrence | 4 | 8.1 |
| Living and well | 14 | 28.5 |

In 20 cases (12.7 per cent) of the group the tumor was adenocarcinoma in character. Ten were inoperable. Three were found to be nonresectable at thoracotomy. In 7 resection was done. One patient is living and well. The longest survival after resection was five years. Bronchoscopy was positive in 8, negative in 4 and not done in 8. The propensity of this group toward cerebral metastasis is striking. Clinically, adenocarcinomas are likely to arise in the lung periphery and to appear as circular masses on roentgenograms.

Seven (4.4 per cent) of the group were oat cell carcinoma in character. Two were inoperable. Two were found to be nonresectable at thoracotomy. In 3 cases resection was done. The longest survival after resection was twelve months. Bronchoscopy was positive in 5, negative in 1 and not done in 1. Clinically the cases run a brief and rapid course to death. Experience has increased the ability to recognize the roentgenologic picture of broadened hilus with radiating fuzzy lines as probably oat cell carcinoma. Obvious metastases were present concurrently with the early symptoms in the 2 inoperable cases.

In 18 cases (11.4 per cent) of the group the tumors were so undifferentiated that they could not be assigned

to one of the preceding groups. Eight cases were inoperable. Three were found to be nonresectable at exploratory thoracotomy. In 7 resection was done. One patient is still living with recurrence eleven months after operation and represents the longest survival following resection in this group. Bronchoscopy was positive in 9 cases, negative in 1 case and not done in 8 cases.

Twenty-eight cases (17.8 per cent) of the group for one reason or another could not be classified. Twenty were inoperable. In 8 cases the tumor was found to be nonresectable at thoracotomy. Not one was suitable for resection. Bronchoscopy was positive in 15, negative in 4 and not done in 9 cases.

It is apparent that the subgroups into which the pathologist can divide carcinoma of the lung on the sole basis of microscopic examination provide information to the clinician of great prognostic importance. The outlook for arrest of disease by resection is best in the epidermoid group and thereafter becomes progressively unfavorable through the other groups. Unfortunately the classification that is made from study of a specimen obtained at bronchoscopic biopsy not infrequently must be changed when the entire lesion is available for section and study. Furthermore, a number of cases are technically resectable in which a bronchoscopic biopsy has not been obtained. In 9 cases resection was carried out under such circumstances in this series, including 1 patient who is living and well. For the latter two reasons, the surgeon is seldom justified in withholding the only hope of saving life at the present time if the lesion is resectable on a basis of clinical judgment and experience.

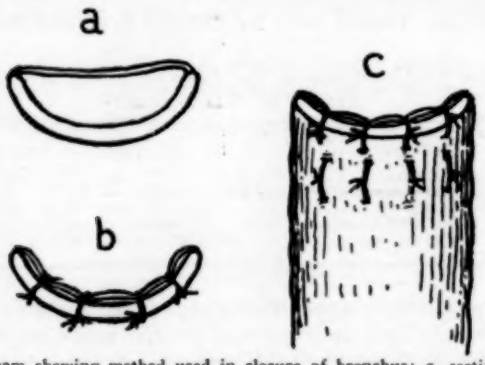


Diagram showing method used in closure of bronchus: *a*, sectioned end of bronchus; *b*, fine interrupted silk sutures approximating posterior membranous bronchus to anterior cartilaginous wall; *c*, same as *b* with addition of a proximal row of longitudinally placed interrupted fine silk mattress sutures.

### TECHNICAL CONSIDERATIONS

Steady improvement in the details of management has paralleled the development of thoracic surgery in the last fifteen year period. These advances, in the main, have been concerned with preparation for operation, anesthetic administration, effective closure of the bronchus, reduction of shock, prevention of infection and atelectasis. In this section a number of technical factors are briefly outlined which are believed important in reducing the hospital mortality from 7 deaths in 19 cases of resection (36.8 per cent) in the first eleven years to 1 death in 30 cases of resection (3.3 per cent) in the last four years.

*Preparation.*—The water soluble vitamins are administered freely. Transfusion is given if necessary to raise the erythrocyte count above 3,800,000 and the hemoglobin above 11.5 Gm. Amino acids are prescribed orally or parenterally, as indicated, if required to raise the serum protein level above 5.5 Gm. per hundred cubic centimeters. Sulfadiazine is given in a dosage of 5 Gm. daily for at least twenty-four hours. Penicillin, since it has become commercially available, is injected in quantities of 20,000 units intramuscularly at three hourly intervals for at least fifteen hours preoperatively. Preliminary artificial pneumothorax was discontinued in the autumn of 1941 for lack of evidence that it was of significant value.

*Anesthesia.*—The conduct of every anesthesia in these cases is under the direct supervision of one of three experienced and highly competent anesthesiologists, although the anesthetic is actually administered in most cases by a younger physician in the course of anesthesia training. Preliminary aspiration bronchoscopy is done if secretions are abundant. The anesthetic agents used are cyclopropane, nitrous oxide or ethylene combined with ether and oxygen. Administration without exception is through an endotracheal tube connected to a closed system with arrangement for carbon dioxide absorption. Provision is made for catheter aspiration through the endotracheal tube as necessary during induction and maintenance. A bronchoscope is kept in readiness throughout the operation for use if required. The endotracheal tube is removed without hesitation and the bronchoscope employed if viscid secretions block contralateral bronchi and are not removed by catheter suction. Bronchoscopy is performed in almost every case at the completion of the operation for thorough aspiration of secretions but is done before the depth of anesthesia is appreciably lightened.

*Operation.*—The patient is placed on the operating table with the diseased side uppermost and one knee flexed. Pillows, sandbags or inflatable bags are not used beneath the thorax. The table is inclined to depress the head 15 degrees below the horizontal level. On occasion, the prone position is employed. A posterolateral incision is used through the periosteal bed of the fifth, sixth or seventh rib. A temporary occluding ligature is lightly tightened about the bronchus as soon as feasible after the pleural cavity has been opened. The tourniquet technic of pulmonary resection, of course, has been abandoned, and all vessels and bronchi to be divided are ligated separately. In cases of lobectomy the anatomic fissure is completed with great care to minimize injury to the remaining lobe. The pulmonary fissures, whether they are physically complete or incomplete, are maintained with striking constancy and are devoid of any important vessels or bronchi until the hilus is reached. If one will devote the essential time and patience to the task, the relatively avascular fissure can be followed into the hilus without resorting to division between clamps. All visible hilar nodes are removed, including the subcarinal and azygos lymph nodes in cases of pneumonectomy. Careful closure of the bronchus is made, the posterior membranous portion of the bronchus being infolded into the anterior cartilaginous portion with two rows of interrupted fine silk sutures, as shown in the illustration. No bronchial leakage has occurred in the 29 cases in which operation has been performed since this method has been used. The bronchus is buttressed with a pleural covering, turned as a flap, if necessary, from the chest wall. Five Gm. of sulfanilamide crystals is placed between the bronchial stump and the pleural covering before the latter is sutured in place. The chest wall is closed in

anatomic layers with interrupted silk sutures. Equalized tension on pleural and periosteal sutures is achieved by use of a mechanical approximator. This holds the wound edges in constant relationship to each other until all sutures have been tied. The operated hemithorax is drained through a stab wound by means of an intercostal catheter. This is placed under 20 cm. suction, which is maintained until the patient is turned into the recumbent position. It is then clamped off. Whole blood is given during the course of the resection, 1,000 cc. usually being administered.

*Postoperative Care.*—The patient is transferred directly from the operating table to a bed with an oxygen tent in place. An atmosphere containing 60 to 70 per cent of oxygen is maintained constantly for the first twenty-four hours and thereafter as needed. The bed is kept in the low Trendelenburg position for the first twelve hours. The intrapleural catheter is connected to a drainage system under 15 cm. of negative pressure (measured in water) on return of the patient to the ward. The drainage is maintained until the effusion becomes serous and clear, usually in two or three days. The catheter is then removed. Sulfadiazine is given in a daily dosage of approximately 3 Gm. for five to ten days. Penicillin is given intramuscularly every three hours in doses of 20,000 to 40,000 units for ten to twelve days. The patient ordinarily becomes ambulatory on the twelfth day and is discharged on the sixteenth day after operation.

SUMMARY

Over a fifteen year period from 1930 to 1944 with 164 consecutive cases of microscopically proved primary lung tumors there were 7 nonmalignant tumors. One was a myxochondroma. Six were bronchial adenomas. There was no hospital mortality, and the 7 patients are alive and well at the present time.

There were 157 cases of carcinoma of the lung. Forty-nine patients (31.4 per cent) were submitted to surgical resection (table 7). Of the resected group, there were 8 hospital deaths (16.3 per cent). Twenty-three deaths subsequently occurred from recurrence of disease (46.9 per cent). Four patients are living with evidence of recurrence (8.1 per cent). Fourteen patients (28.5 per cent of 49; 8.9 per cent of 157) are alive and well at the present time with a chance for five year survival. The longest survival to date is nine years.

Technical procedures have reduced the hospital mortality in the last four years in 30 consecutive resections to 3.3 per cent.

605 Commonwealth Avenue.

**Psychotic Breakdowns.**—Paranoid reactions characterize the greater proportion of situational psychotic breakdowns occurring on the field of battle. The soldier begins to view his comrades with suspicion. Perhaps they are spies. Then he becomes convinced that certain of the officers or men are in league with the enemy. As the process accelerates, the paranoid ideas become more personal. His food, never too good in the front lines, is being poisoned. He is being sent on especially dangerous missions by an officer who is anxious to get rid of him. One sees all degrees of this type of reaction, from the mildly suspicious to the actively combative individual who views every one without distinction as an enemy and has therefore to be kept under continual restraint. Although in such cases there may appear some fear of the individuals involved in the supposed persecution, the principal reaction is one of hostility or rage.—Grinker, Roy R., and Spiegel, John P.: War Neuroses, Philadelphia, Blakiston Company, 1945.

## HYPOGLYCEMIC FATIGUE

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The relationship of neurasthenia and fatigue to carbohydrate metabolism has long been of interest to investigators in psychiatry and internal medicine. Weir Mitchell [1] treated his neurasthenic patients with forced feeding among other measures and obtained good results in some instances. In 1929 Gillespie [2] studied cases of fatigue and exhaustion and found that about one third of them showed a decreased glucose tolerance in the oral test. No other observers have found hyperglycemia in fatigue, although it has been described in some of the psychoses. In 1943 Harrison and Finks [3] reported 31 cases in which hypoglycemia was a factor in the production of symptoms referable to the cardiovascular system. These symptoms appeared two or more hours after meals, were relieved by glucose, were reproduced by insulin and were usually accompanied by a low normal blood sugar. Glucose tolerance was studied by the oral method, but, as the authors stated, the rigid

TABLE 1.—*Insulin Tolerance Test*

| | Case 5 | Case 7 | Case 8 |
|---|---|---|---|
| Fasting | 78 | 70 | 65 |
| 15 minutes | 51 | 22 | 11 |
| 30 minutes | 28 | 17, patient | 7 |
| 45 minutes | 48 | went into shock | 26 |
| 60 minutes | 48 | at this point | 40 |
| 75 minutes | 55 | | 40 |
| 90 minutes | 69 | | 52 |

All figures are true blood sugars.

TABLE 2.—*Blood Sugar in Case 2 After Exercise*

| | |
|---|---|
| Fasting blood sugar | 81 |
| After 2 hours' walk | 65 |
| After 1 hour of gymnastics | 59 |

glucose tolerance test requirements of Conn [4] were not followed. They recommended high protein diets and intermediate feedings, which resulted in the alleviation of symptoms. Portis and Zitman,[5] Portis and Alexander [6] and Portis [7] studied the syndrome of hypoglycemic fatigue in neuropsychiatric patients in greater detail, using the intravenous glucose tolerance test developed by Soskin.[8] In their first paper they described 4 cases of fatigue which were attributed to hyperinsulinism and were treated by diets high in proteins and starchy carbohydrates and low in sugars. Atropine was also used in the therapy on the theory that temporary or prolonged stimulation of the right vagus nerve resulted from emotional processes which were relayed through the hypothalamus to the autonomic nervous system. They found that the administration of atropine

1. Mitchell, S. W.: Fat and Blood, Philadelphia, J. B. Lippincott Company, 1885, chapter 3.
2. Gillespie, R. D.: An Investigation into the Symptoms and Signs of Fatigue and Exhaustion, Guys Hosp. Rep. **79:** 92 (Jan.) 1929.
3. Harrison, T. R., and Finks, R. M.: Glucose Deficiency as a Factor in the Production of Symptoms Referable to the Cardiovascular System, Am. Heart. J. **26:** 147 (Aug.) 1943.
4. Conn, J. W.: Interpretation of Glucose Tolerance Test. Necessity of Standard Preparatory Diet, Am. J. M. Sc. **199:** 555, 1940.
5. Portis, S. A., and Zitman, I. H.: A Mechanism of Fatigue in Neuropsychiatric Patients, J. A. M. A. **121:** 569 (Feb. 20) 1943.
6. Alexander, F., and Portis, S. A.: A Psychosomatic Study of Hypoglycemic Fatigue, Psychosom. Med. **6:** 191 (July) 1944.
7. Portis, S. A.: Medical Treatment of Psychosomatic Disturbances, J. A. M. A. **126:** 413 (Oct. 14) 1944.
8. Soskin, S.: Endocrine Disturbances in the Regulation of the Blood Sugar, Clinics **1:** 1286, 1943.

was followed by normal glucose tolerance curves in persons who had formerly exhibited flat curves. In their second paper [6] 9 similar cases were presented with a discussion of their psychiatric status. A loss of zest and revulsion against routine activities were found in these cases. It was believed that this emotional attitude caused a disturbance in the regulatory mechanisms of the blood sugar concentration resulting in acute attacks of weakness and fatigue because of increased parasympathetic tonus. Their cases were also benefited by psychotherapy, but this procedure alone was not effective in producing results. The fatigue improved completely only after dietary and drug therapy were added.

values, with normal fasting values ranging between 60 and 90 mg. per hundred cubic centimeters. These values are approximately 20 mg. less per hundred cubic centimeters than values given by tungstic acid protein precipitation methods, the commonly used technic. Reducing substances other than glucose are responsible for this difference. The glucose tolerance test was performed as advised by Soskin,[8] using a 50 per cent solution of glucose given intravenously in the dosage of ⅓ Gm. of glucose per kilogram of body weight. In 4 cases the test was done twice. When atropine was employed, it was given one hour before the test was begun in the dose of 1/150 grain (1.3 mg.) hypodermically. This procedure was performed in 5 cases.

TABLE 3.—*Intravenous Glucose Tolerance Tests in Nine Cases of Fatigue*

| | Case 1 | | | Case 2 | | | Case 3 | | Case 4 | | Case 5 | | Case 6 | | Case 7 | Case 8 | Case 9 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1st Test | 2d Test | After Atropine | 1st Test | 2d Test | After Atropine | 1st Test | After Atropine | 1st Test | After Atropine | 1st Test | After Atropine | 1st Test | 2d Test | | | 1st Test | 2d Test |
| Fasting | 59 | 63 | 64 | 74 | 78 | 90 | 63 | 71 | 57 | 72 | 65 | 68 | 90 | 50 | 55 | 66 | 77 | 86 |
| ½ hour | 65 | 77 | 109 | 155 | 131 | 178 | 84 | 119 | 60 | 121 | 79 | 91 | 161 | 113 | 150 | 85 | 63 | 61 |
| 1 hour | 55 | 62 | 55 | 84 | 71 | 110 | 46 | 69 | 57 | 75 | 58 | 32 | 121 | 46 | 62 | 44 | 47 | 58 |
| 1½ hours | 47 | 59 | 62 | 38 | 56 | 86 | 48 | 52 | 56 | 52 | 58 | 44 | 77 | 26 | 44 | 54 | 105 | 69 |
| 2 hours | 48 | 56 | 69 | 45 | 51 | 55 | 49 | 64 | 55 | 54 | 59 | 45 | 53 | 30 | 47 | 53 | 100 | 90 |
| 2½ hours | 52 | 42 | 76 | 56 | 54 | 73 | 71 | 69 | 53 | 66 | 59 | 54 | 52 | 41 | 44 | 54 | | |
| 3 hours | 53 | 55 | 75 | 62 | 59 | 76 | 75 | 71 | 57 | 66 | 58 | 44 | 64 | 40 | 54 | 55 | | |

All figures are true blood sugars (normal is 60-90) except in case 9, which was done with standard technics.

TABLE 4.—*Intravenous Glucose Tolerance Tests in Nine Psychiatric Cases Before and After Administration of Atropine Sulfate*

| | Case 10 | | | Case 11 | | | Case 12 | | | Case 13 | | | Case 14 | | Case 15 | | Case 16 | | Case 17 | | Case 18 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1st Test | 2d Test | After Atropine | 1st Test | 2d Test | After Atropine | 1st Test | 2d Test | After Atropine | 1st Test | 2d Test | After Atropine | 1st Test | After Atropine | 1st Test | After Atropine | 1st Test | After Atropine | 1st Test | After Atropine | 1st Test | After Atropine |
| Fasting | 64 | 89 | 82 | 84 | 60 | 69 | 50 | 65 | 67 | 65 | 52 | 62 | 69 | 80 | 55 | 55 | 82 | 67 | 84 | 76 | 76 | 73 |
| ½ hour | 100 | 102 | 101 | 94 | 100 | 89 | 76 | 108 | 91 | 101 | 80 | 131 | 122 | 124 | 110 | 106 | 86 | 74 | 67 | 80 | 94 | 100 |
| 1 hour | 47 | 50 | 53 | 62 | 49 | 61 | 52 | 63 | 68 | 70 | 45 | 54 | 74 | 79 | 64 | 72 | 58 | 66 | 63 | 64 | 50 | 65 |
| 1½ hours | 49 | 58 | 62 | 56 | 41 | 50 | 59 | 50 | 65 | 48 | 43 | 50 | 44 | 67 | 58 | 52 | 65 | 62 | 73 | 70 | 53 | 65 |
| 2 hours | 54 | 63 | 69 | 60 | 44 | 45 | 60 | 45 | 57 | 50 | 44 | 51 | 47 | 49 | 56 | 53 | 74 | 66 | 76 | 72 | 52 | 58 |
| 2½ hours | 55 | 74 | 71 | 61 | 46 | 52 | 62 | 49 | 64 | 52 | 45 | 60 | 46 | 60 | 42 | 47 | 74 | 67 | 76 | 75 | 50 | 54 |
| 3 hours | 57 | 73 | 79 | 61 | 50 | 52 | 68 | 53 | 64 | 55 | 60 | 62 | 48 | 71 | 45 | 59 | 77 | 74 | 81 | 73 | 48 | 55 |

All figures are true blood sugars (normal is 60-90).

In the Army, fatigue is an important and common complaint. Because of the studies cited, we believe it advisable to investigate the carbohydrate metabolism of all patients complaining of fatigue and weakness.

## METHOD

Male soldiers admitted to the psychiatric service of the hospital complaining of fatigue were utilized as the basis of the study. Physical, neurologic and psychiatric examinations were performed on all patients. The glucose tolerance of these patients was then studied. The patients were prepared for this type of study in accordance with Conn's [4] recommendations by a diet containing at least 400 Gm. of carbohydrate daily for several days prior to the test. Microchemical blood sugar tests were performed on capillary blood by the Somogyi-Shaffer-Hartmann [9] method utilizing a zinc hydroxide precipitation of proteins.[10] This method yields blood sugars which approximate true blood sugar

Insulin tolerance tests were done by giving 1/10 unit of insulin per kilogram of body weight intravenously as described by Albright. Blood sugars were then followed at fifteen minute intervals for ninety minutes. This test was performed in 3 cases.

## RESULTS

*(a) Symptoms.*—1. Fatigue: Of 100 cases of fatigue and weakness studied, 9 were believed to be primarily caused by hypoglycemia. The main complaints in all these cases were fatigue and dizziness. Unlike the fatigue in ordinary neurasthenia, the fatigue suffered by these patients was not continuous but occurred at specified times, such as on arising in the morning or several hours after meals. It almost invariably occurred after having missed a meal. Patient 3 stated that he was weak and tired early in the morning and about ninety minutes after meals. Patient 4 had headaches and pain in the chest every morning before eating. Patient 7 always felt weak and giddy in the morning if he had not eaten. Patient 8 complained of tiredness and nervousness whenever he went without food.

2. Dizziness: All the patients complained of dizzy spells of varying degree and some also gave a history of

9. Shaffer, P. A., and Hartmann, A. F.: II. Methods for the Determination or Reducing Sugars in Blood Urine and Other Solutions, J. Biol. Chem. **45**: 365, 1921. Somogyi, M.: Notes on Sugar Determination, ibid. **70**: 599, 1926.

10. Somogyi, M.: A Method for the Preparation of Blood Filtrates for the Determination of Sugar, J. Biol. Chem. **86**: 655, 1930.

fainting. Patient 2 had dizziness on exertion and complained of spells in which he lost his sense of balance. Patient 4 fainted after having missed a meal. Patient 5 complained of a trembling sensation associated with weakness. Patient 7 had three fainting spells and many dizzy spells.

3. Hunger: Most of these patients spontaneously participated in frequent feedings usually not of candy but of proteins and starches. Patient 3 reported that he frequently ate between meals. If he ate during one of his attacks, the symptoms subsided within fifteen minutes. Patient 4 regularly took a few sandwiches along whenever he went on a flight lasting five hours. The condition of all the patients improved after eating.

4. Effects of Exercise: Exercise almost invariably aggravated the symptoms. Five patients reported that moderate exercise caused fatigue and dizzy spells. In case 2 (table 3) the fasting sugar fell from 81 to 59 after exercise and was accompanied by a dizzy spell.

5. Other Symptoms: Other symptoms related to the cardiovascular and gastrointestinal systems also occurred. Thus heartburn, pain in the chest and dyspnea were noted.

Only 2 of the patients showed signs of maladjustment. Patient 6 had some anxiety following combat experience overseas. Patient 9 was a generally inadequate personality. In these 2 cases it was felt that the hypoglycemia aggravated the psychiatric symptoms but was not essentially their cause. Palliation of the hypoglycemia improved the fatigue but affected the other complaints only slightly. The 7 other cases showed no significant personality deviations.

(*b*) *Laboratory Studies.*—The results of the glucose tolerance test are given in table 3. Six of the patients had flat curves. The other 3 showed the anticipated blood sugar levels after a half hour, but these values fell during the next two hours. Patient 9 went into hypoglycemic shock after one hour. In most of the cases, repetition of the test gave results similar to the first test. However, patient 5 showed a normal result on the second examination.

Three patients were given insulin tolerance tests (table 1). During these tests the patients had fatigue and dizziness similar to their usual complaints. The blood sugar in case 8 fell to 7 mg. per hundred cubic centimeters at the half hour. However, the severity of the symptoms did not depend on the degree of hypoglycemia. Thus patient 7 went into hypoglycemic shock when his blood sugar fell to 17 mg. per hundred cubic centimeters and glucose had to be administered intravenously.

(*c*) *The Effects of Atropine.*—Since atropine was reported to be beneficial in this type of case, several of the patients were given tincture of belladonna 10 minims (0.6 cc.) three times a day for seven days. None reported any improvement. Patient 3 reported that it made him worse. Five of the patients had glucose tolerance tests performed after the administration of $\frac{1}{50}$ grain of atropine hypodermically. The results are given in table 3. In addition, 9 other patients (chronic alcoholic addicts who showed flat glucose tolerance curves but had no hypoglycemic symptoms) had glucose tolerance tests repeated after $\frac{1}{50}$ grain of atropine. The results are given in table 4. Of the 14 cases tested with atropine, 3 showed an approximation to normal, 10 showed no change and 1, case 5, showed an intensification of the hypoglycemia after the administration of the atropine. It was therefore concluded that atropine had no effect on preventing hypoglycemia.

(*d*) *Treatment.*—The treatment used in these cases was entirely dietary. We agree with the diet advised by Portis [11] and by Harrison and Finks.[3] Diets high in proteins and carbohydrates of the more complex variety (starches rather than sugar) with frequent feedings prevented the symptoms in our cases. We did not use intensive psychotherapy. We explained to the patients the mechanism of their symptoms. This alleviated their concern about their condition.

## COMMENT

We believe that hypoglycemic fatigue is a definite syndrome consisting of fatigue and dizziness after periods of abstinence from food or after exercise. There are other vague symptoms of varying degree. The syndrome can also be reproduced by the administration of insulin. The laboratory tests show glucose tolerance curves which are flat or in the course of which the true blood sugar falls to below 50. If the patient is properly prepared and true blood sugars are estimated, the blood sugar is of definite significance. This does not mean that every patient with a flat curve or low blood sugar experiences this symptom complex. However, we believe that patients with the complaints described who have flat curves have hypoglycemic fatigue. The necessary criteria can be demonstrated in only a small percentage of patients with fatigue. It is important to differentiate hypoglycemia from neurasthenia in order to institute proper therapy. In our cases atropine had no significant effect on either the results of the glucose tolerance tests or on the symptoms. We therefore do not concur in the theory that the condition is due to excessive stimulation of the vagus nerve. Alexander,[6] on the basis of psychiatric examinations, suggested that a loss of zest and revulsion to life were present in these patients and believed that this emotional attitude was responsible for the hypoglycemia via the vagus nerve. We examined the patients psychiatrically and found evidence of emotional difficulties in only 2 of them. We could find no definite relationship between the emotional state and the degree of hypoglycemia. We do believe that where hypoglycemia occurs in an unstable person it may aggravate the instability. In general, we have no theory to explain this syndrome. We wish to emphasize that the symptom complex occurs and can be recognized. We have found dietary treatment alone to be adequate and successful and recommend it in these cases. The biotropic mechanisms of some of these patients may have led them to discover it for themselves.

## SUMMARY

1. In 9 cases of fatigue and dizziness due to hypoglycemia the hypoglycemia was demonstrated by the intravenous glucose tolerance test and true blood sugar determinations.

2. Dietary treatment (high proteins and complex carbohydrates) with frequent feedings was effective in alleviating the symptoms.

3. No causal relationship between the hypoglycemia and the emotional status could be found.

4. Atropine had no beneficial effect on the hypoglycemia or on the symptoms.

5. All cases of neurasthenia and fatigue should be investigated for hypoglycemia.

11. Portis and Zitman.[5] Alexander and Portis.[6] Portis.[7]

# THE TREATMENT OF AGRANULOCYTOSIS WITH PENICILLIN

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Patients with agranulocytosis do not die from the suppression of their bone marrow but from the bacterial invasion which commonly develops in the absence of granulocytes.[1] In a body robbed of its leukocytic defenses an overwhelming sepsis may occur. In such cases minor lesions of the skin and mucous membrane quickly spread and bacteria invade the blood stream. The toxemia from this resulting sepsis depresses still more the function of the bone marrow and may prevent spontaneous recovery. Pneumonia and other terminal infectious lesions precede death.

The recent development of sulfonamides and penicillin has improved greatly the treatment and prognosis of agranulocytosis. Prior to 1942 physicians attempted chiefly to stimulate the activity of bone marrow by such leukopoietic agents as pentose nucleotide, yellow bone marrow, liver extract and blood transfusions. But these remedies too frequently proved inadequate and the mortality rate in cases of agranulocytosis was high. A new policy on treatment was indorsed by Dameshek and Wolfson:[1] treatment should be directed toward the prevention and control of secondary infection rather than toward the stimulation of bone marrow activity. If infection and toxemia can be controlled, the bone marrow may take care of itself and recover spontaneously.

Thus was developed the rationale for the use of sulfonamides and penicillin, superior agents for the prevention and control of infections.

At first (between 1941 and 1943) sulfonamides or penicillin were used more often despite the presence of agranulocytosis rather than directly for it, but during the past two years (1944-1945) penicillin, becoming the remedy of choice, has been used specifically for agranulocytosis (table 1). At first most physicians did not rely on penicillin alone but used also leukopoietic agents. The earlier cases of agranulocytosis treated with sulfonamides or penicillin were caused, not by drugs, but by some overwhelming infection and bacterial toxemia. Most of the recent cases of agranulocytosis treated by penicillin have been caused by various drugs.

## SULFONAMIDES FOR AGRANULOCYTOSIS

In June 1942 Dameshek and Wolfson[1] reported the successful treatment of 2 cases of agranulocytosis resulting from aminopyrine: transfusions, pentose nucleotides and liver extract were administered, but credit for the striking recoveries was given chiefly to a use of large doses of sulfathiazole. A year later Heilig and Visvewar[2] reported the successful use of small doses of sulfapyridine alone in 2 cases of "malignant leukopenia and granulocytopenia" caused by highly toxic infections of the urinary tract. Convinced of the greater importance of combating sepsis than of worrying over the bone marrow suppression, Nixon, Eckert and Holmes[3] showed considerable courage by treating 3 cases of agranulocytosis resulting from sulfadiazine (1 case unresponsive to leukopoietic agents) with further doses of sulfadiazine, the very drug responsible for the agranulocytosis: results were satisfactory, and spontaneous regeneration of granulocytes ensued.

Despite these successful results with sulfonamides, in view of the fact that sulfonamides themselves may induce agranulocytosis, physicians have turned to penicillin as an equally effective and safer remedy.

## PENICILLIN IN AGRANULOCYTOSIS

The early studies on penicillin revealed that it does not embarrass leukocytic activity. Abraham, Chain and their associates[4] gave sulfapyridine to an infant with a severe pyelonephritis; granulocytopenia developed, presumably from the sulfapyridine. Penicillin and sodium bicarbonate were given orally to combat the continuing pyelonephritis. The penicillin was apparently given, not for the granulocytopenia, but despite it. The urinary tract infection disappeared and leukocytic regeneration occurred. That penicillin could be used without harm in patients with granulocytopenia or even with agranulocytosis accompanying severe infection and that the suppressed bone marrow recovered as the infection subsided was further demonstrated by Herrell and his associates.[5] A patient with severe nasal and facial cellulitis accompanied by agranulocytosis was given penicillin by Herrell;[6] as the infection subsided, the neutrophils progressively increased.

That penicillin might prove more valuable than sulfonamides for the treatment of agranulocytosis was then suggested by Dameshek.[7] Subsequently penicillin has been successfully used for agranulocytosis in 7 other cases. In the first of these cases the cause of the agranulocytosis was not stated.[8] In the remaining 6 cases the agranulocytosis resulted from drug sensitivity: from sulfonamides in 4 cases,[9] from oxophenarsine hydrochloride (mapharsen) in 2 cases[10] (table 1).

We report an additional case of agranulocytosis successfully treated with penicillin. The case was one of rheumatoid arthritis treated with gold salts, with resulting severe agranulocytosis; recovery was dramatic.

## REPORT OF CASE

An officer aged 39 with chronic rheumatoid arthritis was admitted to the Army and Navy General Hospital on March 26, 1944. In August 1943 he first developed pain, tenderness and

From the Rheumatism Center of the United States Army, Army and Navy General Hospital, Hot Springs, Ark.

1. Dameshek, William, and Wolfson, L. E.: A Preliminary Report on the Treatment of Agranulocytosis with Sulfathiazole, Am. J. M. Sc. **203**: 819-823 (June) 1942.

2. Heilig, Robert, and Visvewar, S. K.: Malignant Leukopenia Successfully Treated with Sulfapyridine, J. A. M. A. **122**: 591-594 (June 26) 1943.

3. Nixon, Norman; Eckert, J. F., and Holmes, K. B.: The Treatment of Agranulocytosis with Sulfadiazine, Am. J. M. Sc. **206**: 713-722 (Dec.) 1943.

4. Abraham, E. P.; Chain, E.; Fletcher, C. M.; Gardner, A. D.; Heatley, N. G.; Jennings, M. A., and Florey, H. W.: Further Observations on Penicillin, Lancet **2**: 177-188 (Aug. 16) 1941.

5. Herrell, W. E.; Nichols, D. R., and Heilman, D. H.: Penicillin: Its Usefulness, Limitations, Diffusion and Detection, with Analysis of 150 Cases in Which it Was Employed, J. A. M. A. **125**: 1003-1011 (Aug. 12) 1944. Herrell.[6]

6. Herrell, W. E.: Further Observations on the Clinical Use of Penicillin, Proc. Staff Meet., Mayo Clin. **18**: 65-76 (March 10) 1943.

7. Dameshek, William: Leukopenia and Agranulocytosis, New York, Oxford University Press, 1944.

8. Keefer, C. S.; Blake, F. G.; Marshall, E. K.; Lockwood, J. S., and Wood, W. B., Jr.: Penicillin in the Treatment of Infections: A Report of 500 Cases, J. A. M. A. **122**: 1217-1224 (Aug. 28) 1943.

9. Sprague, H. B., and Ferguson, L. K.: Agranulocytosis Treated with Penicillin: Report of Case, U. S. Nav. M. Bull. **43**: 1014-1016 (Nov.) 1944. Meredith, W. C.; Douglas, A. H. R., and Fink, Harold: Penicillin in Malignant Granulocytopenia: Report of Case, ibid. **43**: 1017-1019 (Nov.) 1944. Harford, C. G.; Martin, S. P.; Hageman, P. O., and Wood, W. B., Jr.: Treatment of Staphylococcic, Pneumococcic, Gonococcic and Other Infections with Penicillin, J. A. M. A. **127**: 325-329 (Feb. 10) 1945. Dameshek, William, and Knowlton, H. C.: The Use of Penicillin in the Treatment of Sulfonamide Agranulocytosis: A Case Report, Bull. New England M. Center **7**: 142-148 (June) 1945.

10. Smith, L. B.; Cohen, Frank, and Nichols, R. G.: Agranulocytosis Treated with Penicillin, J. A. M. A. **126**: 1027-1028 (Dec. 16) 1944.

stiffness in his left shoulder. During the next six months various peripheral joints became involved: the right shoulder, several joints of the fingers and toes, both elbows, the wrists, the knees, the ankles and the left temporomandibular joint. By March 1, 1944 he was confined to his bed or to a wheelchair and had lost 25 pounds (11 Kg.) in weight. Erythrocyte sedimentation rates, prior to his admission to the Army and Navy General Hospital, had varied between 46 and 72 mm. in one hour, and the treatment had consisted in the removal of dental foci and the use of physical therapy.

On admission (March 26, 1944) the erythrocyte sedimentation rate was 35 mm. in one hour (Wintrobe method, corrected); the erythrocyte count was 4,571,000 per cubic millimeter and the hemoglobin (Haden-Hausser method) was 11 Gm. The total leukocyte count was 9,300 per cubic millimeter; the differential count revealed neutrophils 58 per cent, eosinophils 4 per cent, lymphocytes 33 per cent and monocytes 5 per cent. Urinalyses were essentially normal.

The patient, who had become concerned by the rapid progress of his disease, desired to receive more aggressive treatment. Therefore he was included in a small group of patients with rheumatoid arthritis who were to be treated with penicillin.[11]

TABLE 1.—*Cases of Agranulocytosis Treated with Penicillin*

| | | | | Resulting Agranulocytosis (Lowest Neutrophil Count) | | | | | | Treatment | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | Other Treatment | | | | | |
| Case | Authors | Primary Disease | Treatment | Neutrophils, per Cent | Eosinophils, per Cent | Basophils, per Cent | Lymphocytes, per Cent | Monocytes, per Cent | Corresponding Total W.B.C. per Cu. Mm. | Penicillin, IM = Intramuscular, IV = Intravenous | Blood Transfusions | Pentose Nucleotide | Yellow Bone Marrow Extract | Liver Extract | Surgical Drainage | Result |
| 1 | Abraham et al. (August 1941) | Pyelonephritis (staphylococcic) | Sulfapyridine | 11† | * | * | * | * | 4,000 | Oral penicillin | .. | .. | .. | .. | .. | Recovery |
| 2 | Herrell (March 1943) | Nasal and facial cellulitis (staphylococcic) | * | 0 | .. | 1 | 45 | 54 | 4,200 | 132,000 units IV in 6 days | .. | .. | .. | .. | + | Recovery in 6 days |
| 3 | Keefer et al. (August 1943) | * | * | "Agranulocytosis"—1 case * | | | | | | * | .. | .. | .. | .. | .. | Recovery |
| 4 | Sprague and Ferguson (November 1944) | Gonorrhea | Sulfathiazole | 4 | .. | .. | 92 | 4 | 900 | 6,480,000 units IM in ? days | + | + | .. | + | + | Recovery |
| 5 | Meredith, Douglas and Fink (November 1944) | * | Sulfathiazole | 0 | .. | .. | 100 | .. | 1,000 | 970,000 units IM in 10 days | + | + | .. | + | .. | Recovery in 10 days |
| 6 | Smith, Cohen and Nichols (December 1944) | Syphilis | Oxophenarsine hydrochloride | 0 | 2 | .. | 95 | 3 | 5,300 | 600,000 units IM in 5 days | + | + | + | .. | .. | Recovery in 4 days |
| 7 | Smith, Cohen and Nichols (December 1944) | Syphilis | Oxophenarsine hydrochloride | 0 | .. | .. | 26 | 74 | 5,300 | 380,000 units IM in 6 days | + | .. | + | .. | .. | Recovery in 6 days |
| 8 | Harford, Martin, Hageman and Wood (February 1945) | * | "Sulfonamide" | "Agranulocytosis"—1 case * | | | | | | 210,000 units IV in 4 days | .. | + | .. | + | .. | Recovery |
| 9 | Dameshek and Knowlton (June 1945) | Postpartum pelvic infection | Sulfathiazole | 0 | .. | .. | 100 | .. | 2,000 | 800,000 units IM in 8 days | + | .. | .. | .. | .. | Recovery |
| 10 | Boland, Headley and Hench (this report) | Rheumatoid arthritis | Gold sodium thiomalate | 0 | 0 | 0 | 55 | 45 | 3,400 | 880,000 units IM in 5 days | + | + | + | .. | .. | Recovery in 4 days |

* Data not complete or not given. † Reported as "440 polymorphs per cubic millimeter."

TABLE 2.—*Leukocyte Response to Penicillin*

| Date | Comment | Total Leukocyte Count, per Cu. Mm. | Differential Leukocyte Count (Percentage) | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | Neutrophils | Eosinophils | Basophils | Lymphocytes | Monocytes | Unclassified |
| June 1, 1944..... | Chrysotherapy begun | | | | | | | |
| August 1..... | ..... | 10,500 | 60 | 5 | 0 | 29 | 6 | 0 |
| August 8..... | ..... | 6,400 | 47 | 6 | 0 | 37 | 10 | 0 |
| August 12..... | Total dose of gold salts 550 mg. | | | | | | | |
| August 13..... | Developed "boils," malaise and fever | | | | | | | |
| August 14, a. m. | Penicillin begun..... | 3,400 | 0 | 0 | 0 | 55 | 45 | 0 |
| August 14, p. m. | ..... | 2,900 | 2 | 0 | 0 | 45 | 46 | 7 |
| August 15..... | ..... | 3,800 | 1 | 1 | 1 | 53 | 44 | 0 |
| August 16, a. m. | ..... | 4,100 | 20* | 13 | 0 | 22 | 45 | 0 |
| August 16, p. m. | ..... | 4,400 | 27 | 14 | 0 | 35 | 24 | 0 |
| August 17..... | ..... | 5,200 | 44 | 9 | 3 | 22 | 22 | 0 |

* Eleven per cent stabs; 9 per cent segmented cells.

The physical examination was essentially negative except for the articular involvement. The left temporomandibular joint was slightly tender, thickened and limited in motion. The shoulders were painful on the extremes of motion. The elbows were moderately swollen, tender and painful on forced motion; a flexion deformity of 35 degrees was present on the right, 25 degrees on the left. The wrists, several finger joints, the knees and the right ankle were moderately swollen, tender and painful on motion. Several metatarsophalangeal joints were thickened and tender. In summary, graded on the basis of 1 to 4, the patient had rheumatoid arthritis, activity grade 2+, extension grade 3.

Between April 24 and May 8 (a period of fifteen days) the patient received 3,200,000 Oxford units of penicillin, given intramuscularly. No improvement resulted, nor was he benefited by a subsequent course of injections of typhoid vaccine given intravenously.

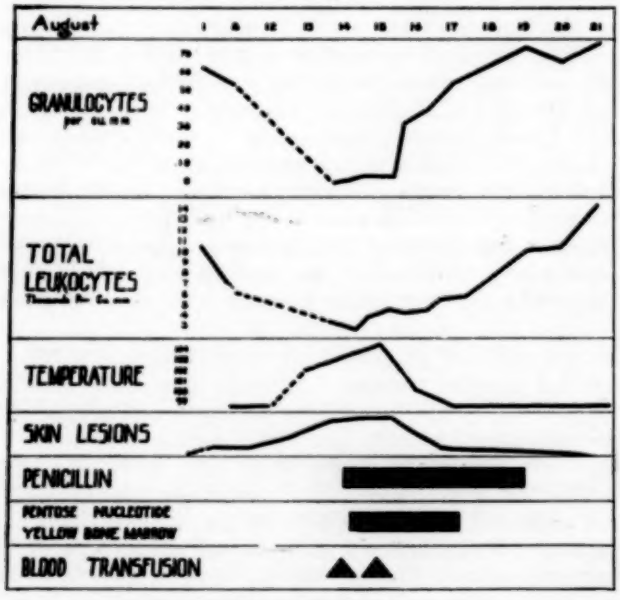
Beginning on June 1, gold salts (gold sodium thiomalate: myochrysine) were given intramuscularly once a week, 25 mg. weekly for three weeks and thereafter 50 mg. weekly. During the first ten weeks of chrysotherapy there occurred no significant alterations in the blood picture, sedimentation rates or urinalyses and no toxic reactions.

11. Boland, E. W.; Headley, N. E., and Hench, P. S.: The Effect of Penicillin on Rheumatoid Arthritis, J. A. M. A. **126**: 820-823 (Nov. 25) 1944.

For almost two or three years the patient had noted mild chronic recurrent folliculitis on his back and buttocks, and a few small insignificant lesions had been present since his admission to the hospital. On August 1 the leukocyte count was 10,500 per cubic millimeter; the differential count revealed neutrophils 60 per cent, eosinophils 5 per cent, lymphocytes 29 per cent and monocytes 6 per cent (table 2). To date a total of 500 mg. of gold salts had been given.

About August 3, several small "new pimples" in the inguinal regions and right axilla were noted by the patient, who considered them to be "chigger bites." On August 8 the total leukocyte count was 6,400 per cubic millimeter; the differential count revealed neutrophils 47 per cent, eosinophils 6 per cent, lymphocytes 37 per cent and monocytes 10 per cent. Urinalysis gave normal results.

The patient's family had moved to town, and he had been permitted to live with them "in quarters." On August 12 50 mg. of gold salts was administered, bringing the total dosage of gold salts to 550 mg. within ten weeks. Following this injection the officer returned to his quarters. That evening he developed a headache and general malaise, and on the next morning (August 13) he noted many new skin lesions, "like boils," in both axillas and inguinal regions and over the medial aspect of the right arm. Although warned to report any toxic effects of gold, being in quarters and loath to be hospitalized again, he delayed in reporting these events. However, by night additional cutaneous lesions affected the legs, arms, buttocks and lower part of the back, and his headache became severe. Reporting then to the hospital, he was found to have a temperature of 102 F.




Course in hospital.

The next morning (August 14) the patient was acutely ill, with a temperature of 103.3 F., an intense headache, severe sore throat, bilateral conjunctival congestion and an extensive severe folliculitis. On the left upper gingiva a small ulceration was present; the pharynx was fiery red but exhibited no localized lesions. The cutaneous lesions now appeared as large papules surrounded by indurated erythematous halos 3 to 4 cm. in diameter. The lungs and abdomen were normal. The total leukocyte count was 3,400 per cubic millimeter; the differential count revealed no neutrophils, eosinophils or basophils; lymphocytes were 55 per cent, monocytes 45 per cent (table 2 and chart). Erythrocytes and platelets numbered 4,600,000 and 128,000 per cubic millimeter respectively; there was 13 Gm. of hemoglobin.

The total absence of granulocytes in the blood in the face of a severe, rapidly progressive folliculitis with considerable toxemia constituted a grave situation. At that time (Aug. 14, 1944), with the exception of the briefest of comment,[8] no report on the use of penicillin for agranulocytosis had appeared. Nevertheless, it seemed to us logical to use penicillin to combat the infection while we administered the usual leukopoietic remedies. Hence penicillin therapy was begun at noon on August 14. Forty thousand Oxford units was given intramuscularly every three hours for four injections, then 20,000 units every three hours day and night. Pentose nucleotide 10 cc. four times daily and yellow bone marrow concentrate 336 mg. every four hours were administered. A transfusion of 250 cc. of whole blood also was given. That evening the patient's condition was unchanged except that the progression of the cutaneous lesions was slowing. Leukocytes totaled 2,900 per cubic millimeter; the differential count revealed mature neutrophils 2 per cent, eosinophils and basophils none, lymphocytes 45 per cent, monocytes 46 per cent, unclassified cells 7 per cent.

The next morning (August 15) the patient was still critically ill. The headache was severe and his temperature ranged from 103 to 104.4 F. No new cutaneous lesions developed, and large vesicles containing clear nonpurulent fluid had developed at the crest of many of the papules. Another transfusion of 250 cc. of whole blood was given. The leukocytes totaled 3,800 per cubic millimeter; the differential count revealed 1 neutrophil, 1 eosinophil, 1 basophil, 53 lymphocytes and 44 monocytes.

The penicillin was continued, and during the next several hours a remarkable and dramatic clinical and laboratory improvement occurred, so that on the morning of August 16 (the fourth day of the acute illness) the headache was gone, the pharynx appeared normal, the gingival ulcer was almost healed and the temperature had dropped to 100 F. Whereas on the previous day we had still been greatly concerned for his life, on this day the patient was suddenly "almost well." The cutaneous lesions had changed notably: the indurated erythematous zones around the papules had disappeared completely. Several vesicles, however, had extended in size to as much as 3 cm. in diameter, and in these the vesicular fluid was now rimmed by a yellow margin of leukocytes. The leukocytes now totaled 4,100 per cubic millimeter; the differential count revealed neutrophils 20 (11 stab cells and 9 segmented cells), eosinophils 13, lymphocytes 22, monocytes 45 per cent. That evening the leukocytes totaled 4,400 per cubic millimeter; the differential count revealed neutrophils 27, eosinophils 14, lymphocytes 35 and monocytes 24 per cent.

On the next day (August 17) the patient felt fine, was afebrile and ate a hearty breakfast. The skin lesions were subsiding rapidly. Several vesicles were now filled with purulent fluid, becoming pustules as a result of the patient's improved leukocyte defense. Leukocytes totaled 5,200 per cubic millimeter; the differential count revealed neutrophils 44, eosinophils 9, basophils 3, lymphocytes 22 and monocytes 22 per cent. The administration of pentose nucleotide and yellow bone marrow concentrate was ended August 17. By August 18, four days after penicillin therapy was begun, the patient was again ambulatory and his blood picture had become essentially normal. On August 19 penicillin was discontinued after the total administration of 880,000 Oxford units in five days. No other signs of toxicity to the gold salts appeared.

For one month preceding the patient's toxic reaction to gold the arthritis had improved gradually. During the acute toxic reaction the joints improved notably; objectively they became practically normal, and for the first time in a year the patient noted no pain at rest. Eleven months after the patient's recovery from the agranulocytosis he was still much improved. It has been noted before that arthritic patients who have a rather severe toxic reaction to chrysotherapy may note unusual improvement, more so than many of those who exhibit little or no toxic reaction.

## COMMENT

When gold salts are administered for rheumatoid arthritis, toxic reactions will occur in patients sensitive to gold even when the greatest caution is exerted.

Minor complications are common, and severe reactions occur in about 5 per cent of cases; the latter may result from a single injection. Agranulocytosis is one of the severe, potentially fatal reactions to chrysotherapy.

We believe that penicillin was responsible for the dramatic recovery in this case. Leukopoietic agents also were administered, but in our experience blood transfusions, liver extract, pentose nucleotide and yellow bone marrow extract have not produced such a prompt recovery.

This case again illustrates the great importance of controlling secondary bacterial infection in agranulocytosis. When infection and toxemia are controlled, the bone marrow is given a chance to recover spontaneously. Penicillin acts as a temporary substitute for the phagocytic activity of granulocytes while granulopoiesis is being resumed.

### SUMMARY AND CONCLUSIONS

Since 1941 sulfonamides and penicillin have been used in the treatment of granulocytopenia or agranulocytosis. At first they were used more often despite the presence of agranulocytosis rather than specifically for it. Seven cases of agranulocytosis successfully treated with sulfonamides have been reported. But because sulfonamides may themselves produce agranulocytosis, penicillin would seem to be the remedy of choice.

Ten cases of agranulocytosis, including the 1 here reported, have now been treated with penicillin: prompt recovery has occurred in every case. This represents a notable improvement in the treatment of the condition and allows for much greater optimism in prognosis than has heretofore been possible. In some of these 10 cases leukopoietic agents were used in conjunction with penicillin, but the current trend is to rely on penicillin alone. Experiences to date indicate that penicillin constitutes the most potent remedy at hand for the prevention or control of the serious, potentially fatal complication of agranulocytosis.

Since this paper was submitted for publication another case of agranulocytosis successfully treated by penicillin has been reported. Thiouracil had been given for hyperthyroidism; the leukocyte count fell to 2,400 with 2 band cells and 2 segmented neutrophils. Treatment included a transfusion, liver extract and a total dose of 560,000 units of penicillin in four days, after which recovery was complete.[12]

12. Rothendler, H. H., and Vorhaus, M. G.: Penicillin in Thiouracil-Induced Agranulocytosis, J. A. M. A. **129**: 739 (Nov. 10) 1945.

**Changes in Brain and Blood in Head Injury.**—The brain is one of the most actively respiring organs of the body, as is evident from its abundant blood supply and the low level of oxygen in the cerebral venous blood. The more intense metabolism occurs in the gray matter, which uses oxygen in vitro about four times as fast as does white matter. It is generally recognized that glucose is the substrate of prime importance for cerebral oxidations. The brain is dependent on a constant supply of glucose from the blood, having very little reserve carbohydrate available. The respiratory quotient of the brain as calculated from arteriovenous differences is close to unity, and oxygen and glucose are taken up from the blood by the brain in approximately equivalent amounts.—Stone, W. E.; Webster, J. E., and Gurdjian, E. S.: Chemical Changes in the Brain and Gasometric Studies of the Blood in Experimental Head Injury, in Trauma of the Central Nervous System, Baltimore, Williams & Wilkins Company, 1945.

## THE TEACHING OF DRUG THERAPY

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A former President of the American Medical Association, Dr. Herman L. Kretschmer,[1] criticized the habits of physicians in writing prescriptions. The criticism provoked dozens of letters and innumerable comments, the majority offering support to Dr. Kretschmer's statements. Not all correspondents were agreed concerning the cause and cure of bad habits. Some blamed the pharmacologists; others insisted that the clinicians were at fault.

Obviously, however, many people are concerned about poor prescription writing. One well known educator wrote that the young medical practitioner dreads the writing of prescriptions because he lacks confidence that he may express his desires correctly, because he is in doubt concerning the best combinations and mixtures, and because he fears criticism from those who might observe his errors. He urges that four groups teach prescription writing: pathologists, clinicians, pharmacists and physicians who have graduated in pharmacy.

Another educator who responded to the Kretschmer article claimed that the pharmacologist should teach the action of chemicals on living things and how this knowledge may be utilized in medical practice. He also believes that the pharmacologist should give instruction in the kind of drugs to use and how to prescribe them but that practical training in prescription writing should be the responsibility of the clinician.

### IS THERE NEED FOR RADICAL CHANGE?

Whenever an aricle concerning teaching of medical subjects is published, much discussion and correspondence are forthcoming and yet specific progressive suggestions are too infrequent, most of the comment being devoted to an expression of personal reaction to the author's communication. Many of those who are interested in the subject can and do provide useful contributions; others can, but fail to expound their own practical findings. As a result, a paper intended to provoke thought and improvement may provoke more thought and comment than actual change.

I would urge that every one who is convinced that he knows of some useful or valuable teaching aids make known these aids when writing to an author of or about a published article on teaching. There should be no hesitation about offering sound suggestions for improvement in medical training. Nor should there be any hesitation about initiating worth while changes even though the changes follow some one else's suggestions. Teaching carries with it a grave responsibility which simply must be met, and met fully. To do otherwise invites regress and a loss of progress which we have been experiencing, especially in the more recent years.

Today on all sides we hear the familiar cry "Let's change things." Medical education does not seem exempt from such pressure. This may be unfortunate if the cry is taken too seriously by those who have not yet learned that evolution is usually more satisfactory than revolution. If we look around and

1. Kretschmer, H. L.: The Teaching of Drug Therapy, J. A. M. A. **125**: 326 (June 3) 1944.

learn the answers to three simple questions we shall not have cause to consider truly radical changes, except perhaps in a few centers where there is actual need for much change. The answers are not always clear, but with thought we ought to be able to respond satisfactorily to these questions: What is the purpose of the subject which I am teaching? Of what does it consist? How can it be best presented?

### COOPERATION IN TRAINING

There is no knowledge of greater value for the general medical profession than that concerned with drug therapy. It is used continuously by practically all physicians, regardless of specialty. There is no subject that requires more careful and continuous study. The study begins when the student is in his second year at medical school and continues until he, as a physician, retires. There is no subject in which there should be greater cooperation by teachers and practitioners with varied knowledge and interest in specialties. And yet this is one field in which cooperation is frequently lacking and confusion is rampant.

The responsibility of providing and maintaining proper knowledge in drug therapy may be divided between the medical school, the hospital and those engaged in the practice of medicine. Educational institutions should realize the fundamental value of pharmacology and therapeutics and should provide a department which permits the maintenance of pharmacology as a separate entity with adequate budget for salaries, laboratory work and research. The man who heads such a department should be well trained in the use of drugs and not some one who may be outstanding in another field but assumes the teaching of pharmacology merely because the vacancy must be filled. The value of several years' clinical experience for such a person is obvious. He should not be a part time employee, nor should he be one of those who believe that research is the only worth while activity. Research is important and plays an important role in the development of all departments and in gaining respect for the university and even from the student body. Furthermore, it is necessary if progress is to be made. However, the first responsibility of the teacher in a medical center is to the student and future physician. If a teacher must choose between his responsibility to the student and that to the institution because the latter demands that priority be given to research, he should not hesitate to pursue the obligation which he owes to those who have chosen to attend his classes. If the institution is properly organized and its directors realize the proper functions of each department, the department head and his associates will seldom, if ever, be placed in a position of having to choose between student needs and university desires; the two will be the same.

Pharmacology is usually taught in the second year in medical schools in the United States and is one of the few subjects which permit the embryo physician to realize that he is in close contact with the actual practice of medicine. Pharmacology is more than a subject. It is the basis of all materia medica which the average physician will practice in carrying out the responsibility of his chosen profession. Thus, each medical student must be taught not only to respect drug therapy but to have a keen desire to learn more about drugs so that when he graduates he will understand their action and possess a willingness to study new compounds with a view to employing those which are useful additions to the medical armamentarium and weeding out those which contribute little except confusion.

It is ruinous to provide a series of didactic lectures during which students are expected to memorize actions, uses and dosages of several hundred drugs. Instead there is needed a course which encourages the student to think, especially since the practice of therapeutics changes so quickly. Physicians must be taught to prescribe drugs for the individual case and not rely on memory for certain favorite formulas which may have been in keeping with the times several decades ago but which are now outmoded by modern chemotherapy. Teaching that the patient must be approached as an individual will result in more attentive students, better physicians and a strengthened medical school.

In these days students cannot be expected to write prescriptions in Latin and employ several systems of measure. They should be taught prescription writing in English and should learn only the metric system. Nor should students be compelled to listen to much detail about some research program in which the lecturer is momentarily interested and about which he is sufficiently enthusiastic to waste hours on details. Such data may be left for extracurricular seminars and symposiums. The pharmacology that is taught to the medical student is offered for the express purpose of aiding the physician to treat disease more efficaciously. This is different from the pharmacology that might be provided for the advanced research student who is interested in, let us say, renal physiology.

There are some problems, however, in which research is being conducted and which may be of special concern to these future physicians. The spending of extra time on the research may be advantageous when the subject includes such items as the control of a cross infection, relief of menstrual discomfort and the control of hypertension. If the student understands the reason for pharmacology and the subject is made interesting, he willingly learns the fundamentals and then asks questions which perhaps at the moment can be answered only on the basis of current research. When this man asks questions he usually wants answers so that he will know how the knowledge can be best applied in the practice of medicine.

### IS THERE NOW NEED FOR EXTENSIVE TEACHING?

Sometimes one hears the argument that there is less need to teach prescription writing and pharmacology, as drug manufacturers have provided little ampules which can be broken for injection and tablets which can be given by mouth, all of them being accompanied by profusely descriptive advertising literature. It is true that manufacturers have made available more pure, more stable and more effective preparations, but no manufacturer has yet been able to offer anything which will serve as a substitute for clinical judgment. The manufacturers have done much to advance our knowledge concerning the use of drugs. They have made funds available for research. They have conducted original research and they have sought better relations with those who are best qualified to evaluate clinically new drugs. However, it should never be forgotten that the medical school is the place to lay a foundation for a knowledge of drugs. Some students feel that they can acquire their knowledge of drugs by experience and practice. Some do acquire knowledge in such a fashion, but others never acquire it because they do not possess

the desire, the initiative or the fundamental training to make proper evaluation.

If a large percentage of students in any one medical center continue to harbor the belief that they can learn all that is necessary when they get in practice, it is an indication of failure on the part of the teaching staff. Either the instructors have not made clear the importance of the subject or the place which it occupies in the medical curriculum and in general practice, or the lectures have been hopelessly dull and inadequate. For example, in prescription writing classes it is not necessary to learn how to prescribe confusing and outdated complex mixtures merely for the sake of perfecting the art of prescription writing; all that will be achieved will be boredom by the class. Nevertheless there are many times when it is necessary to prescribe two or more drugs in a suitable medium, and every physician should be prepared to meet such demands. He must know what to prescribe, when and how. Evidence that discussions concerning prescriptions can be made interesting was especially apparent in one student discussion class which I visited. The person in charge of this class provided once a week a discussion of actual prescriptions written in the hospital clinics and in the wards by the attending men. Discussion was free, spirited and productive. The class was voluntarily attended, no roll call being taken, and yet absentees were few, if any.

### COOPERATION IN TEACHING

In some medical schools there is much overlapping in teaching. For example, students are offered considerable detail concerning the sulfonamides and penicillin in pharmacology, medicine, obstetrics, dermatology, pediatrics and many other courses. The same is true of the hormones and other products such as serums and vaccines. If instructors from various departments have a special interest in one aspect of the subject, additional valuable teaching hours may be wasted as they expound their interest. Each instructor should recognize what preliminary training the students have had, what his associates are offering in their lecture courses and how the topics can be coordinated to the best advantage. At the same time it would be helpful if every teacher took the time and trouble to ascertain the changes which occur from year to year, so that he could estimate more effectively the advances which are occurring and bring his notes up to date every year. The students should be taught how to undertake collateral reading, where to go for their information and how to pick out what is pertinent to the subject. However, such sources of information do not necessarily provide the whole story. It is also the duty of the instructor to provide through his experience a practical interpretation of what the student reads and to give accessory information to develop appreciation of the importance of this subject.

To help the student realize that each case of illness presents a problem which requires careful thought and that it is not always an occasion for an attack with drug therapy, members of various departments should be brought into the picture. All can aid materially in teaching the proper use of drugs: For example, the pathologist can present slides of tissues on which drugs have exerted harmful effects; a representative of the Department of Public Health of Preventive Medicine can show trends of the effects of drugs on disease such as pneumonia, meningitis and typhoid or, on the other hand, on suicides and accidental deaths; the surgeon, anesthetist, radiologist, obstetrician and others can undertake similar participation. Such cooperation can be achieved during regularly assigned lecture periods, during symposiums and even by an interchange of lectures when special topics come up for discussion. For that matter, the lecturer can invite his teaching associates to join in the discussion of a special problem such as the use and misuse of the sulfonamides, of antibiotics or of arsenicals. Care must be exercised, however, to prevent the overlapping previously mentioned. This can be done by the responsible person's simply taking sufficient time to work out a joint program and to learn what his fellow instructors are doing. Such cooperative schemes can be used during the normal conduct of a course and also at its completion, and even as a refresher course in later semesters, the emphasis being placed on what is new.

Each member of a teaching unit should take a personal interest in his work and the student body. He should strive continuously for improvement, welcome suggestions and even offer suggestions to his associates when such action seems indicated. A man who is of sufficient caliber to teach should welcome suggestions without resentment; otherwise he has no place in this type of work. It is the right of the student to expect that the best will be given in lectures and demonstrations. It is the responsibility of the lecturer and the medical school to supply that which the student has a right to expect. In effect, a student and a school take upon themselves a contract when they agree to spend together four or more years for medical training. The teacher should be chosen on the basis of qualification and not merely on "good fellowship" or successful community life. Obviously a pleasing personality is a help, but the teacher must also have adequate knowledge of the subject, must recognize his responsibilities to his students and must be prepared to devote sufficient time and energy to carry out his duties in a satisfactory manner.

### ORIENTATION LECTURES

In the organization of curriculums for medical schools it may help to recall that new students often have inadequate knowledge of the need for and possible application of a given subject and the relation it bears to other subjects offered in the same semester and to those in succeeding semesters. There might therefore be provided lectures intended to acquaint these men and women with the subjects they will study and the reasons for such studies. Otherwise some of the students may miss for a long time the points of the lectures and resort only to memory to obtain sufficient information to pass examinations. As the student enters a lecture course for the first time he should be provided with information concerning what he may be expected to learn and the relation it bears to other subjects in that year and in succeeding years. Such orientation lectures do not necessarily have to be given by a person in charge of the lecture course or department, although usually this would be the case. Often there are other persons who have understanding, who have good training in all subjects and who will be able to present an interesting, complete and informative picture to the student; sometimes it is necessary for several men to participate. Too frequently a student must ask during his training what value the subject is and why he should have to learn so many details. The proper understanding of the course and the part it plays in medicine and adequate organization of the course will minimize such questions.

### HOSPITAL TRAINING

When a student enters a hospital as an intern he should hope for the same progressive attitude that he experienced in medical school. The training of the intern is also a cooperative and, if properly done, an extensive undertaking if the results are to be worth while. So far as the use of drugs is concerned, the intern ought to be shown an example by the experienced men on the staff and should see only the best of drug therapy. He should not be forced to use hospital formularies which list remedies by number or other equally obnoxious methods. Time after time opportunity has arisen to point out the necessity of insisting that hospital formularies contain only useful agents offered under fully descriptive names. Bad teaching policies should not be allowed to persist in hospitals simply because those responsible are indifferent to the needs of the intern. Constructive habits are especially important in this period of the young physician's life, and unsatisfactory policies should be corrected. Attending physicians who want improvement can offer much help by pointing their criticisms and entering freely into discussion with their colleagues. No physician need hesitate to suggest useful reforms. If he does hesitate, he hardly deserves the right to be a member of the medical profession. It is his duty to make his profession a better and a more informed one whenever opportunity arises.

### REFRESHER COURSES

And finally, to carry the subject of drug therapy into the practitioner's life, one might point out the rapidity with which drug therapy is advancing. Today the well informed physician must be in a position to evaluate the drugs and if necessary even to expose some of those which may be foisted on his fellow practitioners and his patients. He must be aware of new and truly useful agents and he must distinguish without error between corrective and palliative treatment. At the same time he must appreciate that drugs are not the only means of successfully treating disease. Sometimes they are the most effective method; on other occasions they are merely adjuncts. Thus the up to date physician cannot depend solely on published scientific articles. Frequently he wants to hear from those who are specially trained in certain fields and who have had sufficient experience to appreciate what he needs. For those that want such knowledge there should be available courses on the use of drugs arranged at hospitals, clinics and medical schools or symposiums at county and local medical society headquarters. Such courses should be in the hands of those best qualified to give interesting and instructive presentations and not in the hands of those who are merely the most popular or aggressive. The courses should not be so long as to make them prohibitive because of living expenses or boresome because of unnecessary detail, but they should be sufficiently complete to provide the latest information. Sometimes such review courses are left in the hands of those who are extremely meticulous and much is lost because of tedious detail. The physician needs a basic knowledge of chemistry, physics, physiology, pathology and other fundamental aspects of a proper understanding of pharmacology and drug therapy, but he has no need or desire in review courses for details that are best suited for postgraduate seminars in chemistry, physics or physiology.

When one reviews the graduate continuation courses listed in the report of the Council on Medical Education and Hospitals, one is impressed by the infrequent reference to courses on therapeutics. Apparently one can with ease learn about anesthesiology, hospital administration and urology, but it is much more difficult to obtain in a teaching center comprehensive information on the use of new drugs. A short time ago the president of one of America's large drug firms stated that instead of spending millions on research the drug industry should be spending billions. One way in which some of this money could be spent effectively would be to underwrite review courses and to provide fellowships and lectureships with no strings attached. What better research can there be in drug therapy than that relating to education concerning the use of drugs? There is no point in developing "miracle drugs" if they are not properly used, and the drugs which are being developed these days require more than ever proper knowledge if they are to be used most effectively. As Dr. Roger I. Lee once said, during testimony concerning a subcommittee on health and wartime education, "Good medical care is based on good medical education, on medical research and on good medical communication. No doctor who graduated ten years ago can be a good medical practitioner solely on what he learned in the medical school. There is therefore the problem of continuing the medical education of the doctor."

Some indication of the need for this continuation of education can be gained simply by examining items available in the average pharmacy. The shelves of almost all drug stores contain packages of substances which have little or no therapeutic value. A colleague of mine, Dr. E. P. Jordan, inquired of a prescription phamacist in a Chicago loop drug store and learned that this "dead stock" is an important item to be computed in the annual store report and that probably it would be considerably higher in the ordinary drug store than in a pharmacy devoted to prescriptions. Inquiry then was made of a pharmacist in a suburban neighborhood and the inquirer learned that in this suburban store there was about $3,000 worth of dead stock which soon would have to be thrown away. Most of the items reached the store through a physician's prescription and from 70 to 80 per cent of this material probably came from smaller and less well known manufacturers. These preparations were ordered because a physician prescribed new or unusual drugs, ointments or the like but failed to use them more than once or twice. Obviously medical or direct mail advertising or the local activities of detail men were the factors largely responsible for the prescribers using these preparations before consulting such groups as the Council on Pharmacy and Chemistry or former teachers who are in a position to supply a scientific evaluation of claimed therapeutic merit. This situation results in criticism from the pharmacist, unnecessary financial expenditure by the consumer, financial loss by the druggist and frequent loss of patient confidence for the physician. It is no credit to the medical profession when pharmacists state that they can tell what detail man is calling on the doctors in their neighborhood by the type of prescriptions that begin to flow into the pharmacy.

### CONCLUSION

There exist today many opportunities and challenges for advancement in rational drug therapy. The use of drugs for the prevention, diagnosis and treatment of disease is of utmost importance and requires continuous study with consideration being given to improvements

in the school, the hospital and general practice. Improvements can be made only when there is thorough understanding of the problem involved and when there is complete and whole hearted cooperation among those concerned. To strive continuously for betterment in teaching and medical practice is a responsibility all serious minded physicians and teaching colleagues must recognize. To do otherwise is to shirk our duties and to invite well deserved criticism.

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## PENICILLIN FOR ULCERS OF LEG TREATED BY PINCH GRAFTS

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Ulcers of the leg are a perennial problem in charity hospitals because of their slowness in healing and consequent long periods of bed occupancy. For many years pinch skin grafts have been used in the dermatology service for most ulcers larger than 5 cm. in diameter because of the shortened time of hospitalization required and because the grafted area is better than the scar which results from normal healing.

In 1943 Ringrose [1] reported the results obtained with this type of graft in 29 cases treated here up to that time. The outcome was good to excellent in 80 per cent, but there was an incidence of 10.3 per cent of complete failure. The cause of failure did not become evident for some time.

Culture of the ulcers on admission, which at first was done sporadically but later became routine, indicated that the type of organism in the ulcer was important in delaying healing and in the failure of the grafts to take. Several types of organisms were found, but only two, i. e. beta hemolytic streptococcus and hemolytic Staphylococcus aureus, seemed to be the chief cause of trouble. With either one present in an ulcer the grafts usually took quite well, but if both were present poor results were the rule and complete failure was common. In most of the complete failures both organisms were present in large numbers.

The conclusion that our failures were due to infection with these organisms was reached at about the time of the publication of Ringrose's paper. We thought that surface application of antiseptics would not control the infection but that administration of a sulfonamide drug might control it. Sulfathiazole was chosen, and it was found that this drug would control the surface infection quite well when given by mouth and the results improved greatly with fewer complete failures. Sulfathiazole, given three days previous to and following application of the grafts, gave good results over a period of about two years, but one difficulty occurred: drug eruptions from sulfathiazole appeared in many of the patients, who apparently had been sensitized by local application of this drug previous to their hospitalization. Those sensitized reacted with fever and a drug eruption within twenty-four hours after starting the sulfathiazole, and it could not be continued for the requisite period of time to control the infection.

When penicillin became available it offered an opportunity to try a more effective and less toxic agent, as the organisms concerned are usually susceptible to its action. Hirshfeld and his associates [2] and also Lam and McClure [3] found that penicillin by injection greatly improved the percentage of good results in skin grafting of burns. Both felt that its action lay in its ability to control the infection in the granulating wounds. We can confirm this finding in a series of 9 cases of leg ulcers treated by application of pinch grafts in which penicillin was used before and after the grafting to control the surface infection caused by the beta hemolytic streptococcus and hemolytic Staphylococcus aureus.

The technic is not difficult and is as follows: On entrance to the ward a culture is taken and the ulcer is then bandaged with dressings kept wet with cool, one-half saturated boric acid solution. The bandages are removed only once in twenty-four hours and immediately reapplied. After four to nine days the granulations are red and bleed easily and the ulcer is ready to graft. A second culture is taken at this time and it usually shows the same organisms, especially the beta hemolytic streptococcus and the hemolytic Staphylococcus aureus, which were present on the first culture. Penicillin is then given by intramuscular injection, 15,000 units being given every three hours for a minimum of twenty-four and a maximum of forty-eight hours before grafting. Another culture is taken just before grafting, and often no organisms are found by routine culture. Small pinch or Reverdin grafts are removed from a donor area on the thigh and placed on a sterile sponge wet with isotonic solution of sodium chloride. The grafts are then placed on the ulcer. Local anesthesia has been obtained by 2 per cent procaine infiltration or by application of an ice bag containing about 30 Gm. of salt directly to the skin of the thigh. The bag is left in place approximately thirty minutes before taking the grafts, and it gives good anesthesia of about twenty minutes' duration and has been very satisfactory in the smaller ulcers. The addition of salt to the ice lowers the temperature of the bag and shortens the period needed to induce the anesthesia to thirty minutes, whereas ice alone, as recommended by Mock,[4] requires two hours. General anesthesia may be necessary with the larger lesions. When the surface of the ulcer has been covered by the grafts a dry gauze dressing, made up of about twenty layers, is bandaged firmly in place and kept from slipping by use of spiral adhesive strips. The donor area is painted with an alcoholic solution of 1.5 per cent gentian violet and left open. The painting is repeated four times a day for several days with an aqueous solution of 1.5 gentian violet.

After the skin grafting, penicillin is continued from twenty-four to seventy-two hours, depending on the apparent severity of the original infection. The bandage is routinely removed on the fifth day. Cool boric acid compresses are then used until any areas where the grafts failed to take are healed. This takes a variable period of time but seldom more than a week. Then the patient is allowed out of bed, wearing a cotton elastic bandage applied from the base of the toes to the head of the fibula. After a few days of this the patient

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1. Ringrose, Edward J.: The Treatment of Large Stasis Ulcers by Pinch Skin Grafts, J. Iowa State M. Soc. **33**: 175 (April) 1943.

2. Hirshfeld, J. W.; Pilling, M. A.; Buggs, C. W., and Abbott, W. E.: Penicillin and Skin Grafting, J. A. M. A. **125**: 1017 (Aug 12) 1944.

3. Lam, C. R., and McClure, R. D.: Penicillin as an Adjunct in Skin Grafting of Severe Burns, Proc. Am. Fed. Clin. Res. **1**: 56, 1944.

4. Mock, Harry E., Jr.: Refrigeration Anesthesia in Skin Grafting, J. A. M. A. **122**: 597 (June 26) 1943.

is discharged with instructions to wear the supportive elastic bandage whenever he is on his feet and to lie down, remove the bandage and rest one hour out of every four hours for several weeks.

We have treated 9 ulcers by this method. In 7 of these less than 2 per cent of the grafts were lost, in 1, 33 per cent were lost and in the other, 40 per cent. The best results were obtained in the largest ulcers.

### REPORT OF CASE

The following case history is illustrative of this method:

A white man aged 68 was admitted to the University Hospitals because of an ulcer of the leg of five years' duration. The ulcer appeared two years after a simple fracture and had enlarged slowly and continuously. There was no history of typhoid or thrombophlebitis, he had no varicose veins and all pulses were palpable in this leg.

Examination revealed a large irregular ulcer on the anterior and medial surfaces of the lower half of the right leg. The ulcer measured 17 by 15 cm. in its greatest dimensions. The floor of the ulcer was covered with a large amount of greenish yellow pus, and the granulation tissue was poor. A culture on admission revealed beta hemolytic streptococcus, Pseudomonas aeruginosa and Proteus vulgaris.

The patient was placed on bed rest and cool, continuous, wet dressings of half saturated boric acid solution to the right leg. Seven days after admission the granulation tissue was bright red and bled easily (fig. 1). A culture at this time showed beta hemolytic streptococci, hemolytic Staphylococcus aureus and Pseudomonas aeruginosa. The patient was started on penicillin by the intramuscular route and was given 15,000 units every three hours for seven doses. Twenty-four hours after starting the penicillin another culture was taken which showed no growth. The ulcer was then grafted with pinch grafts and a dry dressing applied. The penicillin was continued for twenty-nine doses after the grafting was done.

Fig. 1.—Ulcer of the leg when ready for grafting.

Five days after grafting, the dry dressing was removed from the grafted site and at least 98 per cent of the pinch grafts had taken (fig. 2) and the patient was discharged with the ulcer completely healed and in good condition three weeks later.

From our past experience, it is our feeling that without penicillin the pinch grafts would have failed in this case because of the size of the ulcer and because of the surface infection due to beta hemolytic streptococcus and hemolytic Staphylococcus aureus.

Fig. 2.—Appearance of same leg a few days after removal of bandage.

### SUMMARY AND CONCLUSIONS

1. Failure of skin grafts to take in infected ulcers of the leg is apparently caused in many cases by the surface infection with beta hemolytic streptococcus and hemolytic Staphylococcus aureus.

2. Penicillin, intramuscularly, before and after grafting, has proved useful in controlling this surface infection.

3. The use of penicillin resulted in success in 9 cases of such ulcers.

4. We would recommend the routine use of penicillin intramuscularly before and after skin grafting in cases of ulcer of the leg that are treated by pinch grafts in which the surface infection is caused by the beta hemolytic streptococcus and hemolytic Staphylococcus aureus, and it could probably be used with benefit for all ulcers, irrespective of the nature of the surface infection.

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**Concussion States of War Neuroses.**—If the postconcussive state is characterized by headaches which are relieved by lying down but made worse on stooping and by dizziness, weakness, tinnitus, decreased hearing, faulty ocular convergence, difficulty in concentration, sleeplessness and spells of faintness, we may assume that the brain has suffered injury. Unfortunately, spinal punctures are rarely performed in the early stages, so that we never obtain information regarding the presence of blood, an increase in the number of cells or elevation of the total protein in the cerebrospinal fluid.—Grinker, Roy R., and Spiegel, John P.: War Neuroses, Philadelphia, Blakiston Company, 1945.

# EFFECT OF TRIDIONE IN THE CONTROL OF PSYCHOMOTOR ATTACKS

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The manifestations of epilepsy have been classified according to the type of seizure, and grand mal, petit mal, jacksonian and psychomotor attacks are most frequently seen. This classification, however, is not entirely satisfactory. There may be a variability in manifestations from time to time; there may not be a clear-cut distinction between one type of attack and another; there may be *formes frustes* which cannot be classified, and many patients have more than one type of seizure. Furthermore, it is questionable whether petit mal and psychomotor seizures should be referred to as convulsive disorders, a term which is used more or less euphemistically as a synonym for epilepsy.

The various types of seizures listed are differentiated not only by the clinical manifestations of the individual attack but also by the electroencephalographic picture.[1] All may be classified as paroxysmal cerebral dysrhythmias. Since the advent of electroencephalography, therapy has been determined not only on the basis of the clinical picture but also on the basis of the electroencephalographic findings.

Of late many advances have been made in the treatment of epilepsy, and in the majority of cases the control of seizures is moderately satisfactory. Bromides, later phenobarbital and more recently diphenylhydantoin sodium [2] have proved to be quite effective in reducing the frequency of grand mal attacks. Surgical removal of the discharging focus plus the anticonvulsant drugs just mentioned are the measures of choice in the treatment of jacksonian or focal epilepsy.[3] The petit mal seizures yield less readily to anticonvulsant therapy. The drugs mentioned have not proved to be too helpful. A ketogenic diet has been advocated,[4] but its efficacy is doubtful. *dl*-Glutamic acid hydrochloride has also been reported to be of therapeutic benefit,[5] but this must be given in massive doses and in combination with other drugs, and our experience with it has not been encouraging. Amphetamine sulfate, caffeine, mebaral (n-methylethyl-phenyl barbituric acid) and other drugs have been used. This multiplicity of therapeutic attempts in itself suggests the difficulty in controlling the condition. Recently Lennox [6] and others have reported on the effectiveness of tridione (3,5,5-trimethyloxazolidine-2,4-dione), which has seemed to be of more benefit in the relief of petit mal seizures than any other therapeutic measure yet tried.

Psychomotor attacks, or, as they have been known for a longer period of time, psychic equivalents or variants, are likewise infrequently influenced by medication. In attacks of this type there usually are no convulsive manifestations, although there may be some tonic spasm or contortion of the trunk muscles, and the patient may stand immobile but with a slow rotation of the body. The principal characteristic of the attack consists in a period of automatic or abnormal behavior. The patient appears to be confused, and he may perform some unreasonable, unmotivated or purposeless act. He may automatically carry out a seemingly purposeful act. Frequently he is seen to mutter to himself or make chewing movements. He may void involuntarily. The degree of impairment of consciousness is variable, but the patient usually is not aware of what he is doing and has complete amnesia for what has transpired even though there is no complete loss of consciousness during the attack. The patient may become irritable or wildly violent and may commit crimes during an attack. The seizure may last for a few minutes or many hours. Dream states, fugue states and epileptic automatisms are types of psychomotor attacks. The social consequences of seizures of this sort are apparent.

Psychomotor seizures may be diagnosed not only by the clinical description of the attacks but also by the electroencephalographic picture. They are usually associated with abnormally slow waves, varying from three to six per second, often of a high voltage.[1] The electroencephalogram taken during or between attacks may show groups or series of these slow waves with broad or square tops, but with waves of the normal rhythm of from eight to ten per second still present at the crest. There may be an appearance of a positive potential which recurs at a rate of from three to six per second superimposed on an otherwise normal rhythm. The usual anticonvulsant drugs seem to have little effect on patients with psychomotor seizures. Bromides or phenobarbital may even induce amnesic or psychotic-like episodes. Diphenylhydantoin sodium has been reported to be of value,[2] as has glutamic acid,[5] but in our experience neither of these has been very effective. Patients are often incapacitated by the attacks and, as the result of the nature of the seizures, may require custodial or institutional care.

Tridione (3,5,5-trimethyloxazolidine-2,4-dione, Abbott) is an entirely new compound possessing analgesic properties. The hypnotic effects of the oxazolidine-2,4-dione derivatives were first described by Erlenmeyer.[7] These and related drugs were also found to be anticonvulsants. Everett and Richards [8] found that 3,5,5-trimethyloxazolidine-2,4-dione was the most potent analgesic in the group and that it also possessed definite anticonvulsant properties. They showed that it is effective in the control of convulsions in mice, guinea pigs, cats and rabbits produced by metrazol, strychnine, pictotoxin, thujone, cocaine and procaine

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1. Gibbs, F. A.; Davis, H., and Lennox, W. G.: The Electroencephalogram in Epilepsy and in Conditions of Impaired Consciousness, Arch. Neurol. & Psychiat. **34**: 1113 (Dec.) 1935. Gibbs, F. A.; Lennox, W. G., and Gibbs, Erna L.: The Electroencephalogram in Diagnosis and in Localization of Epileptic Seizures, ibid. **36**: 1225 (Dec.) 1936. Gibbs, F. A.; Gibbs, Erna L., and Lennox, W. G.: Cerebral Dysrhythmias of Epilepsy: Measures for Their Control, ibid. **39**: 298 (Feb.) 1938; Electroencephalographic Classification of Epileptic Patients and Control Subjects, ibid. **50**: 111 (Aug.) 1943; Epilepsy: A Paroxysmal Cerebral Dysrhythmia, Brain **60**: 377 (Dec.) 1937; The Likeness of the Cortical Dysrhythmias of Schizophrenia and Psychomotor Epilepsy, Am. J. Psychiat. **95**: 255 (Sept.) 1938.

2. Merritt, H. H., and Putnam, T. J.: A New Series of Anticonvulsant Drugs Tested by Experiments on Animals, Arch. Neurol. & Psychiat. **39**: 1003 (May) 1938; Sodium Diphenyl Hydantoinate in the Treatment of Convulsive Disorders, J. A. M. A. **111**: 1068 (Sept. 17) 1938. Lennox, W. G.: The Drug Therapy of Epilepsy, ibid. **114**: 1347 (April 6) 1940.

3. Penfield, W.: Epilepsy and Surgical Therapy, Arch. Neurol. & Psychiat. **36**: 449 (Sept.) 1936. Penfield, W., and Erickson, T. C.: Epilepsy and Cerebral Localization, Springfield, Ill., Charles C Thomas, Publisher, 1941.

4. Wilder, R. M.: The Effect of Ketonemia on the Course of Epilepsy, Mayo Clin. Bull. **2**: 307, 1921. Helmholz, H. F., and Goldstein, Moe: Results of Fifteen Years' Experience with the Ketogenic Diet in Treatment of Epilepsy in Children, Am. J. Psychiat. **94**: 1205 (March) 1938.

5. Price, J. C.; Waelsch, H., and Putnam, T. J.: *dl*-Glutamic Acid Hydrochloride in Treatment of Petit Mal and Psychomotor Seizures, J. A. M. A. **122**: 1153 (Aug. 21) 1943. Waelsch, H., and Price, J. C.: Biochemical Aspects of Glutamic Acid Therapy for Epilepsy, Arch. Neurol. & Psychiat. **51**: 393 (April) 1944.

6. Lennox, W. G.: The Treatment of Epilepsy, M. Clin. North America **29**: 1114 (Sept.) 1945; Epilepsy, Clinics **4**: 504 (Aug.) 1945; The Petit Mal Epilepsies: Their Treatment with Tridione, J. A. M. A. **129**: 1069 (Dec. 15) 1945.

7. Erlenmeyer, H.: Zur Kenntnis der Eigenschaften isosterer und strukturähnlicher Verbindungen: VIII. Ueber die narkotischen Eigenschaften einiger Derivate des 2,4-Dioxothiazolidins und des 2,4-Dioxooxazolidins, Helvet. chim. acta **21**: 1013, 1938.

8. Everett, G. M., and Richards, R. K.: Comparative Anticonvulsant Action of 3,5,5-Trimethyloxazolidine-2,4-Dione (Tridione), Dilantin and Phenobarbital, J. Pharmacol. & Exper. Therap. **81**: 402 (Aug.) 1944.

and also found that it raised the electrical threshold at which convulsions appeared in rats. They expressed the belief that it has an action comparable to that of phenobarbital but that it produces less depression in effective doses. Its acute and chronic toxicity in experimental animals was found to be very low.

In human beings, in therapeutic doses, tridione possesses analgesic and mild sedative action. It has been reported to be effective in the control of grand mal seizures, but large doses are necessary and it is probably no more effective than phenobarbital or diphenylhydantoin sodium. Some observers, however, believe that it either does not help grand mal or makes the attacks worse.[9] It has shown considerable promise in the symptomatic control of petit mal seizures when given in smaller doses.[6] Oral administration has produced nausea and skin eruptions in some patients, and others have noticed sensitivity to light, blurring of vision and change in color vision when the preparation is taken in large doses (1 to 1.3 Gm. three times a day). These disappear after discontinuation of the drug. Some patients have been said to report a feeling of light headedness and drowsiness during the first hour after ingestion.

Tridione [10] has been used in the treatment of a group of patients suffering from psychomotor attacks. In every instance the diagnosis was based both on the clinical description of the attacks and on the electroencephalographic findings. A large percentage of the patients had had attacks for many years which had failed to respond to other medical regimens. Many had grand mal and petit mal attacks in addition to the psychomotor attacks. The grand mal seizures, and sometimes the petit mal attacks, had been controlled by phenobarbital, bromides and/or diphenylhydantoin sodium, but in no instance had the psychomotor attacks been controlled by these drugs.

## REPORT OF CASES

Case 1.—L. C. B., a youth aged 16, was admitted to the University Hospital because of attacks of disordered consciousness and disturbed behavior. Since childhood he had had recurring periods of "dizziness" which were characterized by a light headed sensation and followed by "blacking out." These lasted for from a few seconds to ten minutes. He did not completely lose consciousness during them and did not fall over, and there were no motor phenomena. About six weeks before admission the patient had had a similar attack, but there was amnesia for twelve hours following it. This was succeeded by numerous seizures, which started with the dizzy sensation and "blacking out" but were followed by bizarre behavior, sometimes over a period of several hours. During these he wandered or ran about, became violent and frequently fought with people. He sometimes slumped into unconsciousness for a short time. There was always complete amnesia for the period of uncontrollable behavior, and after regaining conciousness he was fatigued. At the time of the onset of the seizures the patient was given diphenylhydantoin sodium and phenobarbital, but these medications seemed to have no effect, and at the time of his admission he was having attacks daily or more frequently. There was a history of a brief period of unconsciousness following a head injury four years previously, but the past health had been good in other respects.

The physical examination showed no abnormality aside from a mild gynecomastia bilaterally, and partial syndactyly. The neurologic and laboratory examinations, including a roentgenogram of the skull, were also negative. The intelligence quotient was 104 on the Wechsler-Bellevue scale. The electroencephalogram [11] showed a dominant picture of three to four per second medium to high voltage waves. These were flat topped, with finer components superimposed on them. They occurred serially and singly in the motor regions and in the temporomotor regions on both sides. Hyperventilation slightly raised the height of the waves and brought on a few more of the slow waves but caused no continuous slowing or high voltage bursts. There were also eight to nine per second medium voltage waves with an intermittent sinusoidal pattern, especially in the occipital region, but there were no spike and wave patterns. It was felt that the electroencephalogram showed evidence of both psychomotor and grand mal characteristics.

The patient was placed on medication with diphenylhydantoin sodium 0.3 Gm. per day and phenobarbital 0.13 Gm. per day, with no control of the episodes of disordered consciousness, and he continued to have daily seizures. He was extremely difficult to manage, and during the attacks he was belligerent and often violent. After ten days in the hospital the patient was given tridione 0.32 Gm. three times a day in place of the phenobarbital. The attacks were completely controlled on this medication and there was a decided psychologic improvement as well. Two weeks after his discharge from the hospital the patient returned, stating that he had failed to take an adequate dosage of the medication and had had another attack of disordered consciousness. Since this time, however, he has taken both preparations regularly and when last seen, four months after the tridione had been started, the patient had had but the one attack mentioned. There had been no symptoms of toxicity.

Case 2.—C. T. H., an unmarried woman aged 28, had had attacks of disordered consciousness for five years. During these attacks the patient would stare at people and would not know what was going on about her or what was said to her. Sometimes her body would become stiff and spin about, and there were some brief movements of the extremities, but she never fell over and there was no complete loss of consciousness. She would often exhibit automatic behavior and would carry out irrelevant but seemingly purposeful acts. She would sometimes take off her clothes, even though in a public place. The patient drooled and frequently was incontinent during the attacks, and on many occasions she was aware that she had had an attack only by perceiving that she had been incontinent. She had been treated by many physicians with many types of medication, and when first seen she was taking diphenylhydantoin sodium 0.4 Gm. per day and phenobarbital 0.13 Gm. per day and was having from ten to twenty seizures a month.

The physical, neurologic and laboratory examinations, including a roentgenogram of the skull, were entirely negative. The electroencephalogram showed a dominant picture of low voltage fast activity of a rather sharp type. There were frequent two to three per second bursts of high voltage with superimposed high frequency waves. The record was interpreted as consistent with a grand mal type of disorder with psychomotor components.

The patient was placed on tridione 0.32 Gm. three times a day in addition to the diphenylhydantoin sodium and phenobarbital. She has now been on these medications for five months, and there has been just one severe attack, presumably a grand mal seizure, and two or three petit mal episodes. All of these have occurred while under unusual emotional stress. There has been a decided psychologic improvement. There have been no toxic symptoms.

Case 3.—T. V., a married woman aged 31, had been having attacks of disordered consciousness for a period of four years. These were characterized by a transient loss of memory and confusion with automatic behavior. The patient sometimes took off her clothes during the attacks and was frequently incontinent with them. Regardless of where she was, she would want to lie down and go to sleep. There were no convulsive manifestations. The entire episode usually lasted from ten to fifteen minutes and there was complete amnesia for this perood of time. The seizures occurred about three times a week. Diphenylhydantoin sodium, mebaral, phenobarbital and bromides, individually and in various combinations, had failed to control them, and these medications were difficult for her to take, as they all caused drowsiness. Diphenylhydantoin sodium in a

9. Lennox, W. G.: Personal communication to the author.
10. The tridione used in this study was supplied by the Department of Medicine, Abbott Laboratories, North Chicago, Ill.
11. The electroencephalograms in this study were recorded and interpreted by Dr. Basu K. Bagchi.

dosage of 0.4 Gm. daily caused the development of ataxia and anorexia.

The physical, neurologic and laboratory examinations, including a roentgenogram of the skull, were negative. The electroencephalogram showed many six to seven per second high voltage waves and some two to three per second high voltage waves occurring singly or serially. These frequently were cone shaped or had flat tops or jagged sides. There were also many clear and abortive spike and wave patterns of the larval type. Hyperventilation increased the height of the waves and brought on occasional three to four per second slow waves. The record was interpreted as showing evidence of both psychomotor and petit mal seizures.

The patient was placed on tridione 0.32 Gm. three times a day in addition to the diphenylhydantoin sodium 0.1 Gm. three times a day. During the first three months after the institution of this therapy there was but one attack, and there was definite psychologic improvement. On discontinuing the tridione, however, while continuing to take the diphenylhydantoin sodium, the patient experienced a recurrence of the spells and had many in the course of a few days and became quite confused. The day after the tridione was resumed the attacks stopped and the confusion and irritability left completely.

CASE 4.—A. F. H., an unmarried man aged 24, had had attacks of disordered consciousness for a period of six years. These were of three types: periods of confusion lasting for but a moment, prolonged periods of amnesia during which the patient would move his arms about, show bizarre behavior and sometimes expectorate and chew his tongue, and occasional grand mal convulsions. He had been taking diphenylhydantoin sodium and phenobarbital singly and in combination, with control of the grand mal seizures but without change in the frequency of the petit mal or psychomotor attacks.

The routine physical, neurologic and laboratory examinations, including a roentgenogram of the skull, showed no abnormality. The electroencephalogram showed a moderate proportion of six to seven per second high voltage waves and two to three per second discharges with other waves superimposed on them, and there were a few abortive spike and wave patterns. Hyperventilation increased the height of the waves and brought on many serials of six to eight per second waves and occasional two to three per second waves with many spike and wave patterns. There were abnormalities characteristic of grand mal, petit mal and psychomotor seizures.

The patient was placed on tridione 0.32 Gm. three times a day in addition to diphenylhydantoin sodium 0.3 Gm. daily and phenobarbital 0.13 Gm. daily. He was then free from attacks for six weeks, until his supply of tridione was exhausted. At this time he had a return of the psychomotor seizures. On discontinuance of the phenobarbital there was a return of the grand mal seizures. Resumption of all three medications again brought about complete relief.

CASE 5.—R. A. C., a married man aged 27, had had bizarre attacks for a period of one year. During these he was apprehensive, had a feeling that he was unable to breathe and would stop whatever he was doing. He would obey commands but would attempt to turn away from people. There was complete amnesia for the attacks but no loss of consciousness and no convulsive manifestations. Following the episodes the patient would feel fatigued and sleepy. A right temporosphenoidal brain abscess had been drained at the age of 9. There were no residual symptoms of this.

The physical, neurologic and laboratory examinations showed no abnormality. A roentgenogram of the skull showed an old operative defect in the right midparietal region. The intelligence quotient was 105 on the Wechsler-Bellevue scale. The electroencephalogram showed many three per second extremely high voltage waves of a sloping form. These were found in both cerebral hemispheres but were especially well defined in the right temporal region. The patient had an attack during electroencephalography, and at this time there were extremely high voltage two to three per second waves with flat tops and a few spike and wave patterns. Hyperventilation increased the height and slowness of the waves. The record suggested the presence of both psychomotor and petit mal seizures, with some evidence of definite localization in the right hemisphere.

Treatment with diphenylhydantoin sodium, bromides and mebaral was not effective in controlling the attacks. These continued to occur from twice a day to five to six times a week. The patient was placed on tridione 0.32 Gm. three times a day in addition to phenobarbital and sodium bromide, and while on this regimen he had but three petit mal attacks in a period of three weeks. The phenobarbital and bromide were discontinued, and the psychomotor spells recurred from two to four times daily. When the phenobarbital and bromide were again given with the tridione there was complete relief from the attacks.

CASE 6.—W. G. H., an unmarried man aged 30, had been having attacks of disordered consciousness for twelve years. There was a history of a head injury without loss of consciousness two weeks before the onset of the spells, and a family history of epilepsy. The attacks were of two types. In one the patient was confused and exhibited peculiar behavior. "He would walk around like a drunken man" and would carry out automatic acts. There was complete amnesia for these episodes. The other attacks were grand mal convulsions. The seizures occurred from two to three times a day in spite of medication with diphenylhydantoin sodium and phenobarbital.

The physical, neurologic and laboratory examinations, including roentgenographic examination of the skull, showed no abnormality. The intelligence quotient was 98 on the Wechsler-Bellevue scale. The electroencephalogram showed a dominant frequency of six to seven per second. There were many sudden high voltage bursts of three to four per second with dicrotic notches and slightly irregular tops lasting for fifteen to twenty seconds at a stretch. Hyperventilation resulted in a rise in voltage of the regular six to seven per second frequency with admixture of three to four per second waves. Some of the waves had a superimposed high frequency pattern, and there were rare low voltage spike and wave manifestations. The recording was interpreted as showing characteristics of the psychomotor pattern with grand and petit mal components as well.

Diphenylhydantoin sodium 0.3 Gm. daily and phenobarbital 0.065 Gm. daily did not control the attacks. Diphenylhydantoin sodium 0.3 Gm. daily and triodione 0.32 Gm. three times a day also failed to control the attacks. Diphenylhydantoin sodium, phenobarbital and tridione together completely controlled the attacks during the patient's hospitalization. There was improvement in the patient's behavior. When last seen, three months after therapy with triodione had been instituted, the patient stated that the psychomotor attacks had been entirely controlled. He had, however, had a few grand mal attacks, perhaps two or three during this period of three months. When the diphenylhydantoin sodium was increased to 0.4 Gm. daily in addition to the tridione and phenobarbital the grand mal attacks also were controlled.

## CONCLUSIONS

Tridione is effective in the control of psychomotor seizures. In some cases there has been a spectacular improvement. Thus far it has not proved to be sufficiently effective when used alone, partly owing to the fact that most of the patients were subject to grand mal and petit mal attacks in addition to the psychomotor seizures, and it has been found necessary to continue to control these with phenobarbital, bromides and/or diphenylhydantoin sodium, as they frequently recurred when these drugs were discontinued. The use of tridione, however, in conjunction with other anticonvulsants such as phenobarbital, bromides and diphenylhydantoin sodium, has almost completely controlled the psychomotor seizures in a large percentage of the cases and has resulted in a decided psychologic improvement.

The drug has been given by oral administration in a dosage of 0.32 Gm. (5 grains) three times a day to every patient. In this dosage no symptoms of toxicity have been reported and no contraindications or limitations to the use of the drug have become apparent.

# RUBELLA IN PREGNANCY CAUSING MALFORMATIONS IN NEWBORN

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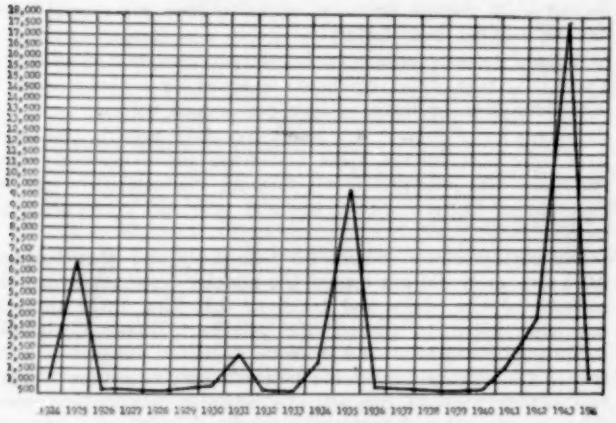
Investigation is being directed at the present time to congenital malformations of the newborn of mothers having had rubella during pregnancy. The congenital anomalies noted have been cataracts, heart disease, deaf-mutism, microcephaly, microphthalmos, atresia of the biliary ducts and renal glomerulosclerosis.

Table 1 presents most of the authors and their publications.

Gregg [1] in 1941 reported a series of 78 cases of congenital cataracts occurring in the children of mothers who had rubella from 1939 to 1941. Swan [2] investigated the problem by examination of congenitally defective children and subsequent corroboration of the rubella complication by an interview with the mothers. Swan [3] later reported further observations of rubella during pregnancy with its sequelae of congenital defects in the child. Carruthers [4] reported a high incidence of deaf-mutism, with a classification of the type, in his



Epidemics of rubella in Milwaukee, 1924-1944.

series of 18 cases. Reese [5] reported 3 cases of congenital cataracts and also congenital heart lesions within the first month of pregnancy. Erickson [6] in 1944 cited 11 cases in which either congenital eye or heart defects were attributable to rubella occurring in early pregnancy. Rones [7] reported 4 cases of congenital ocular abnormalities due to maternal rubella during the early months of pregnancy. Perera [8] in 1945 cited 1 case of congenital cataract with a probable cardiac lesion. deRoetth [9] in 1945 reported 2 cases of bilateral congenital cataracts with associated anomalous development.

Most of the investigators of this timely subject based their conclusions on individual records. All of the investigators had failed to cite the total number of women having rubella in pregnancy with no congenital defects in the offspring. Each publication was based on clinical observation of the newborn infant, and the relationship to rubella during the pregnancy was in almost every instance noted in the history.

It is quite apparent that there is some relationship between these anomalies and the occurrence of this

TABLE 1.—*Recent Publications on Rubella*

| Author | Year Reported | Number of Cases | Types of Congenital Malformations: Cataracts, Microphthalmos | Congenital Heart Lesions | Deaf-Mutism | Microcephaly | Atresia of Bile Ducts |
|---|---|---|---|---|---|---|---|
| Gregg [1] | 1941 | 78 | 78 | 44 | .. | .. | .. |
| Swan and others [2] | 1943 | 31 | 14 | 17 | 7 | 3 | .. |
| Swan and others [3] | 1944 | 12 | 2 | 4 | 5 | .. | 1 |
| Carruthers [4] | 1945 | 18 | 0 | 1 | 18 | 3 | .. |
| Reese [5] | 1944 | 3 | 3 | 3 | .. | 1 | .. |
| Erickson [6] | 1944 | 11 | 11 | 9 | .. | .. | .. |
| Rones [7] | 1944 | 3 | 3 | 1 | .. | .. | .. |
| Perera [8] | 1945 | 1 | 1 | 1 | .. | .. | .. |
| deRoetth & others [9] | 1945 | 2 | 2 | 1 | .. | .. | .. |

innocuous disease during pregnancy. We do not take issue on this particular point. We do feel certain, however, that the entire subject must be interpreted from a public health point of view. It is our purpose to present data covering a three year period, noting the total number of recorded cases, investigating, whenever possible, all married women having had the disease, and interviewing all pregnancy cases as to the status of the child.

## EMBRYOLOGY [10]

*Lens of the Eye.*—The lens of the eye first appears as a thickening of the ectoderm over the developing optic cup during the fourth week. This lens placode is converted to the lens vesicle. The lens vesicle detaches from the ectoderm in the sixth week and loses its cavity by the eighth week. In association with the other structures of the eyeball, the lens reaches its typical appearance during the third month.

*Internal Ear.*—The primordium of the internal ear has been observed in embryos of 3 to 4 weeks. It appears from the ectoderm as the otic placode. This invaginates to form the otocyst. Differentiation of the otocyst results in the formation of the vestibular primordium and the cochlear primordium. The vestibular primordium eventually forms the semicircular canals, and the cochlear primordium forms the cochlea. This differentiation occurs at about 4 weeks and becomes

TABLE 2.—*Survey 1942-1944*

| | 1942 | 1943 | 1944 |
|---|---|---|---|
| Total number of cases | 3,998 | 17,703 | 525 |
| Total number of married women | 73 | 477 | 31 |
| Unable to investigate | 54 | 354 | 21 |
| Number investigated | 19 | 123 | 10 |
| Number pregnant | 1 | 9 | 1 |

distinct by 8 weeks. The essential features of the morphology of the cochlea and the semicircular canals are completed early in the third month.

In the meantime the eighth cranial nerve has developed. The ganglions associated with the auditory nerve are formed from the neural crest at the fourth to the fifth week. They become associated with the differentiating otocyst. Early in the third month morphologic differentiation is practically complete.

From the South View Hospital of the Milwaukee Health Department and the Department of Medicine, Marquette University School of Medicine.

1. Gregg, N. M.: Tr. Ophth. Soc. Australia **3**: 35, 1941.
2. Swan, C.; Tostevin, A. L.; Moore, B.; Mayo, H., and Black, G. H. B.: M. J. Australia **2**: 201 (Sept. 11) 1943.
3. Swan, C.; Tostevin, A. L.; Mayo, H., and Black, G. H. B.: M. J. Australia **1**: 409 (May 6) 1944.
4. Carruthers, D. G.: M. J. Australia **1**: 315 (March 31) 1945.
5. Reese, A. B.: Am. J. Ophth. **27**: 483 (May) 1944.
6. Erickson, C. A.: J. Pediat. **25**: 281 (Oct.) 1944.
7. Rones, Benjamin: M. Ann. District of Columbia **13**: 285 (Aug.) 1944.
8. Perera, C. A.: Am. J. Ophth. **28**: 186 (Feb.) 1945.
9. deRoetth, A. F. M., and Greene, P. B.: Northwest Med. **44**: 222 (July) 1945.
10. Jordan, H. E., and Kindred, J. E.: Textbook of Embryology, ed. 4, New York, D. Appleton-Century Company, Inc., 1942. Arey, L. B.: Developmental Anatomy, ed. 4, Philadelphia, W. B. Saunders Company, 1941.

*Septums of the Heart.*—Partition of the primitive chambers of the heart begins between 5 and 6 weeks. Development of the interatrial and interventricular septums is rapid and completed by the end of the seventh week. However, the interatrial septum is not entirely completed until the foramen ovale is closed at the time of birth.

## DATA

The accompanying chart presents a series of 44,482 cases of rubella occurring in the city of Milwaukee over a period of twenty years. It will be noted that this disease occurred in epidemic proportions about every ten years. We thought it advisable to investigate the most recent years for a survey of the problem of pregnancy and rubella, and therefore we chose the years of 1942, 1943 and 1944.

Table 2 presents a total number of 22,226 cases during this time. The health department records reveal a "Mrs." in a series of 581 women during this three year survey. Of these cases we were able to investigate 152 women.

Among the 152 women investigated, 11 had rubella during their pregnancy and 5 had rubella up to the second month, 4 from the second month to the fourth month, 1 in the seventh month and another in the ninth month.

Table 3 presents the record in which in case 1 there were twins, both normal. Case 3 is the only evidence of either a coincident or direct involvement from the disease. We have purposely included the report of case 12. This case was of particular interest to us because the mother, who had rubella in her second month, gave birth to a normal child at term. In 1937 she had a normal pregnancy and gave birth to a child at that time with bilateral congenital cataracts.

TABLE 3.—*Case Records*

| No. | Initials | Age | Disease | Months Pregnant | Distribution of Rash | Duration of Rash, Hours | Postauricular Nodes | Date Reported to City Health Dept. | Birth Date of Infant | Expected Birth Date | Sex | Congenital Malformations |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | E. W. | 34 | Rubella | 1½ | Mainly face and neck | 24 | —? | 5/11/43 | 12/29/43 | 12/28/43 | ♂ | None; normal } Twins |
| 2 | E. W. | 34 | Rubella | 1½ | Mainly face and neck | 24 | —? | 5/11/43 | 12/29/43 | 12/28/43 | ♀ | None; normal } Twins |
| 3 | G. S. | 25 | Rubella | 1 | Mainly face; entire body also | 48 | ? | 4/30/43 | 10/26/43 | 12/18/43 | ♀ | Stillborn; hydrocephalic |
| 4 | P. B. | 23 | Rubella | 2 | Face and body | 72 | ++++ | 2/ 8/43 | 9/ 9/43 | 9/ 9/43 | ♀ | None; normal |
| 5 | L. N. | 27 | Rubella | 2½ | Face and body | 12 | ++++ | 2/24/43 | 8/18/43 | 8/14/43 | ♀ | None; normal |
| 6 | C. H. | 25 | Rubella | 3 | Face and body | 48 | ++++ | 3/20/43 | 8/24/43 | 8/26/43 | ♂ | None; normal |
| 7 | M. R. C. | 32 | Rubella | 2 | Face and body | 48 | —? | 5/ 5/43 | 11/28/43 | 12/15/43 | ♂ | Blue baby; sinus disease; otitis media; hydrocephalus which receded spontaneously; perfectly normal at present |
| 8 | I. L. | 30 | Rubella | 3¾ | Upper chest | 48 | ++++ | 5/ 7/43 | 10/18/43 | 10/11/43 | ♀ | None; normal |
| 9 | R. H. | 34 | Rubella | 7 | Face and body | 48-72 | ++++ | 3/ 1/43 | 5/ 3/43 | 5/ 3/43 | ♀ | None; normal |
| 10 | J. K. | 23 | Rubella | 9 | Face and body | 48-72 | ++++ | 3/10/43 | 3/19/43 | 3/17/43 | ♂ | None; normal |
| 11 | R. Z. | 35 | Rubella | 2½ | Face and body | 48 | ++++ | 4/10/42 | 10/24/42 | 10/12/42 | ♂ | None; normal |
| 12 | M. L. | 30 | Rubella | 2 | Face and neck | 48 | ++++ | 4/ ?/44 | 1/ 4/45 | 1/ ?/45 | ♂ | None; normal |
| * | M. L. | .. | No rubella | ... | ..... | .. | ..... | 6/ ?/37 | 6/ ?/37 | ..... | ♂ | Bilateral congenital cataracts |

## COMMENT

Our approach to this subject was based on the records of the City of Milwaukee Public Health Department. Most authors on this subject reported cases seen in private practice or from a correspondence survey for congenital defects. In the event of congenital defects, further investigation for its relationship to rubella was carried out.

In our 11 cases only 1 evidenced a pathologic course. This percentage (9.09) does not concur with the statement of Swan, who claims that all mothers with such exanthems during the first two months of pregnancy will give birth to children with congenital abnormalities. It would be most proper for a well organized survey to be conducted from other health department records covering this particular subject. Incidentally, it might include a similar study of other virus diseases.

Another phase of this disease meriting a most cautious and careful approach must be considered. The question of therapeutic abortion has been suggested by the following quotations: "The justification for therapeutic abortion, if rubella occurs during the first two months of pregnancy, should be debated, since, according to Swan's figures and our own impression, 100 per cent of such babies will have serious congenital malformations." [6] "In view of the fact that, in a high proportion of cases, the contraction of rubella in the early months of pregnancy will lead to congenital defects in the infants born subsequently, it has been suggested that in such cases the pregnancy should be terminated." [2] "Should pregnant women who contract exanthemata in the first three months of pregnancy be aborted?" [5] From our records we cannot justify these conclusions. This subject is deserving of a much more intensive study than has heretofore been presented.

## SUMMARY AND CONCLUSIONS

1. Rubella has occurred in the city of Milwaukee in epidemic proportions approximately every ten years.

2. In a survey of the period 1942, 1943 and 1944, 22,226 cases of rubella were reported, of which 152 married women were investigated. Of these, 11 were pregnant at the time they had rubella.

3. Of the 11 pregnant women who had rubella, the disease in 5 occurred during the first two months, in 4 during the second to fourth month, in 1 in the seventh month and in 1 in the ninth month.

4. One stillbirth occurred among the 11 cases; 1 woman had twins, both normal; 1 woman gave birth to a child with congenital cataracts during a normal pregnancy, and at the time during which she had rubella in the second month of her pregnancy she delivered a normal child.

5. Our records do not justify consideration of termination of pregnancy because of rubella.

6. The occurrence of congenital malformations in virus diseases in pregnant women is a subject deserving of further careful investigation.

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# Clinical Notes, Suggestions and New Instruments

## COMPLETE SUBSIDENCE OF SCLERODERMA WITH DIHYDROTACHYSTEROL

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This case of diffuse scleroderma is being reported because of the remarkable, almost dramatic response to therapy with dihydrotachysterol. The patient has been observed and treated by us for the past five years.

The clinical diagnosis of generalized scleroderma is usually not very difficult. The skin shows a boardlike thickening and appears to be stretched and hide bound. There is also a glistening with a characteristic ivory white sheen. Because of the extreme infiltration, the skin cannot be folded or picked up from the underlying connective tissues. The patient's face usually has a masklike appearance because of the tautness and increased density of the skin.

Scleroderma runs a protracted and progressive course resulting in steadily increasing disability, restriction of motion and immobility. Ulcerations, especially of the finger tips, contractures and impairment of normal physiologic functions, such as deglutition, are not uncommon sequelae.

The pathogenesis of diffuse generalized scleroderma is obscure. The disease is characterized by a progressive fibrosis which involves not only the skin but also the internal vital organs, thus making the prognosis grave. In the last decade, diffuse scleroderma was studied from the metabolic point of view and attention was focused particularly on calcium metabolism. In some cases it was found that the calcium content of the skin was increased by approximately 30 per cent. In 1927 there were introduced highly active substances affecting the calcium and phosphorus metabolism through the action of ultraviolet rays on ergosterol. The following isomers were isolated: ergosterol, lumisterol, tachysterol, calciferol, toxisterol, suprasterol I and suprasterol II. Of these, calciferol, lumisterol and the two suprasterols have been crystallized. These sterols differ from one another in their effects, only tachysterol, calciferol and toxisterol being pharmacologically active. Calciferol (vitamin D) is a potent antirachitic agent; the other two have little antirachitic value but exert powerful effects on calcium metabolism.

Holtz in 1927 attributed the toxic symptoms of hypercalcemia, produced through the administration of large doses of irradiated ergosterol, to these nonantirachitic sterols (the so-called "calcinose factor"). Through hydration or heating of the irradiated ergosterol the antirachitic factor was destroyed, whereas the toxic or serum calcium elevating factor remained. Dihydrotachysterol was obtained from unstable tachysterol by treatment with nascent hydrogen and was marketed as A. T. 10 (antitetany factor 10). By 1938 several hundred cases of low calcium diseases had been treated with uniformly good results.

### REPORT OF CASE

*History.*—A white woman aged 70 was admitted to Mount Sinai Hospital in April 1938 because of an enlarged thyroid gland. This enlargement, about four times normal size, had existed for the past thirty-five years. On admission, a diagnosis of nontoxic goiter and chronic infectious arthritis was made. May 8, 1938 a subtotal thyroidectomy was performed and the pathologic report revealed a follicular colloid adenomatous process. The postoperative course was somewhat stormy, but eventually the patient made a good recovery.

One year later, in June 1939, the patient came to the Dermatology Outpatient Department with the following cutaneous symptoms:

1. The skin on the face, chest, abdomen and extremities had a hard, leathery appearance with ivory white and alabaster-like patches. There were also several areas of hyperpigmentation and hypopigmentation. The density of the skin was so great that it could not be picked up between the thumb and the index finger.

2. The face was infiltrated and drawn into a masklike appearance.

3. Mobility of the mouth was restricted to about half of normal, and the skin appeared to be firmly attached to the underlying structures.

The clinical picture was that of a classic case of scleroderma, and this diagnosis was confirmed by microscopic examination of a piece of skin taken for biopsy.

*Treatment and Result.*—On the assumption that the condition was caused by a parathyroid deficiency resulting from the thyroidectomy, treatment with dihydrotachysterol was instituted. In September 1939 15 drops were given daily and continued for eighteen days. A total of 45 cc. of dihydrotachysterol was given, after which the patient was put on a forty-five day rest period. Treatment was then resumed with a daily dose of 15 minims (1 cc.) until an additional 30 cc. had been taken. The total dosage was 75 cc. given over a period of five months. While under treatment, blood calcium and phosphorus determinations were made frequently and were always within normal limits.

The patient made excellent progress with definite somatic improvement and complete regression and recession of all physical symptoms except the maldistribution of pigment. Her skin was completely restored anatomically and physiologically. In addition, personality change occurred. From a severely depressed mental state the patient emerged with a much more cheerful outlook on life.

### COMMENT

It is our impression that this patient sustained damage to her parathyroid glands during the performance of the subtotal thyroidectomy. This produced a disturbance in calcium metabolism sufficient to have resulted in scleroderma. As dihydrotachysterol is specific for disturbances in calcium metabolism, the excellent results obtained would seem to indicate that her scleroderma was parathyroprivic in origin.

### SUMMARY

A case of diffuse scleroderma occurred one year following subtotal thyroidectomy for a colloid goiter. On the assumption that the scleroderma arose because of a disturbance in calcium metabolism secondary to surgical injury of the parathyroids, dihydrotachysterol was administered, with almost dramatic response.

100 Central Park South—124 East Eighty-Fourth Street.

From the Dermatological Department of Mount Sinai Hospital, Service of Dr. Isadore Rosen.

## PAIN IN THE PERFORATING TYPE OF PEPTIC ULCER

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Moynihan once said that peptic ulcer could be diagnosed over the telephone. He pointed out that duodenal ulcer is likely to produce the typical "food-comfort-pain" picture whereas gastric ulcer is more prone to cause the typical "food-comfort-pain-comfort" syndrome. All physicians are familiar with the classic picture of recurrent episodes of epigastric burning, gnawing or hunger distress which begin from half an hour to several hours after meals and are eased by food or soda. The telephonic diagnosis of peptic ulcer would go far amiss if it should be employed in cases of complicated peptic ulcer. Although it is true that uncomplicated peptic lesions involving stomach, duodenum or anastomatic stoma follow the usually accepted pattern so well described by Moynihan, it is equally true that the more serious the complication the less stereotyped and clocklike are the symptoms caused by such lesions. Change from the accepted pattern is particularly true of penetrating types of peptic ulcer.

When such ulcers begin to invade the wall of the viscus more deeply so that serosa and contiguous tissues are involved.

From the Division of Medicine, Mayo Clinic.

the pain becomes more severe, relief following the ingestion of food or soda is less prompt and adequate and there is more associated tenderness. The usual "food-comfort-pain" or "food-comfort-pain-comfort" cycles become distorted or are obliterated entirely. Furthermore, under such conditions varying shifts of pain into secondary regions are common. Our object in this report is to lay emphasis on the great variability of the pain under such circumstances.

Gastric ulcers often will produce pain or distress which is felt in the left side of the epigastrium. The pain may be referred laterally to the back or extend through to the back. The pain in the back, which may be extremely severe, is felt more frequently to the left than to the right of the lower thoracic portion of the spinal column. Pain extending into the left shoulder and neck is evidence of deep penetration of the ulcer with involvement of tissue with phrenic innervation.

The pain of duodenal ulcer is felt in the pit of the stomach or to the right of the midline just above the umbilicus. If the pain extends to secondary regions, it usually extends to the right costal region, into the thorax or around to the back. When the pain is severe, it may extend through to the back. Localization of the dorsal pain is usually at the level of the ninth and tenth thoracic vertebrae to the right of the spinal column.

Shift of pain due to duodenal ulcer to the left usually indicates penetration of the pancreas, a bilaterally placed organ. It is our belief that when ulcer invades tissues supplied by spinal nerves the pain often may be interpreted as being felt along the superficial, highly differentiated branches of these same nerves; for example, along the distribution of the intercostal nerves.

REPORT OF CASE

A white man aged 38 entered the Mayo Clinic on Feb. 3, 1944 and was hospitalized immediately. He stated that he had been well until 1926, at which time an epigastric gnawing sensation began one to two hours after meals. This distress was relieved by milk and by soda. Attacks lasting several days to a week occurred several times each year, but neither vomiting nor melena was associated. Posterior gastrojejunostomy performed in 1929 gave relief of pain until 1931, when it returned in more severe form with penetration to the back. Thereafter several increasingly severe attacks occurred each year until 1938, when roentgenograms revealed a gastrojejunal colic fistula. At operation closure of the colon, resection of the jejunum with end to end anastomosis and gastroduodenostomy were accomplished. The patient stated that since this operation he had had no further ulcer distress.

The illness which brought the patient to the clinic began in the spring of 1940 with pain in the right lower part of the chest. There was no abdominal pain. The pain was a hot, burning pain which would start either anteriorly or posteriorly and extend in either direction. It was skin deep. It was not related to meals. On some occasions hot coffee would ameliorate it somewhat but never would eliminate it completely. This pain had been present save for an occasional day almost continuously since onset. On one occasion it had been relieved temporarily by injection of the intercostal nerves with procaine.

A modified Sippy type of management was employed for two weeks after the patient was admitted to the hospital, with no relief at any time. Laboratory examination of the blood revealed hemoglobin 15.8 Gm. per hundred cubic centimeters of blood, leukocytes 11,800 per cubic millimeter of blood, blood urea 40 mg. per hundred cubic centimeters and sedimentation rate of erythrocytes 21 mm. per hour (Westergren). An occasional leukocyte and erythrocyte were noted in the urine; the guaiac test on the stool was negative (1 specimen) and spinal fluid was normal. Gastric analysis before treatment revealed a total acidity of 72 and a value for free hydrochloric acid 62 (Töpfer's method); 130 cc. of gastric content was obtained. After ten days of the Sippy treatment total acidity was 24, free hydrochloric acid was 14 and 150 cc. of contents was obtained. Results of gastric analysis were within normal limits in other respects. Roentgenograms of the chest, gallbladder, thoracic portion of the spinal column and colon and an excretory urogram revealed no abnormalities. Roentgenologic examination of the stomach, however, revealed considerable deformity, especially at the outlet.

Because the patient failed to improve under medical management for ulcer, despite decrease in gastric acids, injection of the sixth to eighth thoracic nerves on the right side with procaine was carried out. Within fifteen minutes the patient experienced remarkable relief, which lasted throughout the night so that he was able to sleep well, which was then truly unusual for him. However, because it was felt that the pain probably was referred from a perforating duodenal ulcer, exploratory operation was carried out. A huge duodenal ulcer was found on the anterior and lateral wall of the second portion of the duodenum. The ulcer was perforating onto the gallbladder, which formed its base. Partial gastrectomy and partial duodenectomy were carried out.

COMMENT

In this case of recurrent duodenal ulcer there were no abdominal complaints, but pain was present in the right lower portion of the chest. It should be emphasized that pain in cases of recurring ulcer may have no relation to meals, may not be relieved in the usually accepted manner and may be referred to regions remote from the abdomen. Furthermore the clinical impression in these cases must ofttimes be relied on when the roentgenologic studies reveal no evidence of recurring ulceration.

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# Council on Pharmacy and Chemistry

## NEW AND NONOFFICIAL REMEDIES

*The following articles have been accepted as conforming to the rules of the Council on Pharmacy and Chemistry of the American Medical Association for admission to New and Nonofficial Remedies. A copy of the rules on which the Council bases its action will be sent on application.*

AUSTIN SMITH, M.D., *Secretary.*

**PROCAINE HYDROCHLORIDE** (See New and Nonofficial Remedies, 1945, p. 97).

The following additional dosage forms have been accepted:

THE WM. S. MERRELL CO., INC., LOESER LABORATORY DIVISION, NEW YORK

**Solution Procaine Hydrochloride 1% W/V:** 30 cc. and 100 cc. Each cubic centimeter contains procaine hydrochloride 10 mg. in isotonic solution of sodium chloride with chlorobutanol 0.5 per cent as a preservative.

**Solution Procaine Hydrochloride 2% W/V:** 30 cc. and 100 cc. Each cubic centimeter contains procaine hydrochloride 20 mg. in isotonic solution of sodium chloride with chlorobutanol 0.5 per cent as a preservative.

**PERTUSSIS VACCINE COMBINED WITH DIPHTHERIA AND TETANUS TOXOIDS** (See THE JOURNAL, Jan. 5, 1946, p. 31).

The following dosage form has been accepted:

SHARP & DOHME, INC., GLENOLDEN, PA.

**Diphtheria-Tetanus-Pertussis Antigens Combined, Alum Precipitated:** One 3 cc. vial (one 3 dose immunization) and one 10 cc. vial (three 3 dose immunizations). Preserved with phenylmercuric nitrate 1:50,000.

**DIETHYLSTILBESTROL** (See New and Nonofficial Remedies, 1945, p. 428).

The following dosage forms have been accepted:

CARROLL DUNHAM SMITH PHARMACAL COMPANY, ORANGE, N. J.

**Diethylstilbestrol (in Peanut Oil):** 1.0 mg. per cc.: 1 cc. ampuls.

**Tablets Diethylstilbestrol:** 0.1 mg., 0.5 mg., 1.0 mg. and 5.0 mg.

**PENICILLIN** (See New and Nonofficial Remedies, 1945, p. 214).

The following dosage form has been accepted:

WINTHROP CHEMICAL CO., INC., NEW YORK

**Penicillin Calcium:** Vials containing 100,000 or 200,000 units.

THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION

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SATURDAY, MARCH 2, 1946

## THE TREATMENT OF SHOCK FROM PROLONGED EXPOSURE TO COLD

Sometime ago The Journal commented editorially on the experiments by the German Professor Weltz, who had accidentally discovered that rapid warming in water of 104 to 113 F. was life saving to guinea pigs and hogs that had been chilled to the threshold of death. Now the discovery of the entire contents of Himmler's cave in Hallein placed in Allied hands a number of secret S. S. records. These are the basis of a report by Major Alexander.[1] The letters convey a complete account of the organization and administration of the experiments on human beings performed by Dr. Rascher, assisted by his wife, Nini, who was formerly secretary and mistress of Himmler. Dr. Rascher proposed to Himmler experiments on human beings in the concentration camp of Dachau. Persons were cooled until the intragastric temperature was reduced to 79.5 F. and the rectal temperature to 79.7 according to thermoelectric measurements. Fatalities occurred only among the groups in which the bodies were immersed in such a position that they covered the occiput and thus affected the brain stem and the hind brain. Necropsies of such cases always revealed free blood up to 0.5 liter in the cranial cavity; the heart invariably showed dilatation, especially of the right chamber. These subjects died as soon as the rectal temperature reached 82.4 F. despite all attempts at resuscitation. Other important observations were an increase of the viscosity of the blood, increase of hemoglobin, increase of leukocytes and a rise of blood sugar to twice its normal value. Auricular fibrillation made its appearance regularly at 86 F. rectal temperature. During attempts to save severely chilled subjects, rapid rewarming was proved in all cases preferable to slow rewarming. Even after removal from the cold water the temperature of the body tended to sink rapidly. The experiments have also shown the inefficacy of pharmaceutic measures as well as of rewarming by animal warmth, that is, by animal bodies or women's bodies.

An interesting document is Professor Hippke's letter of thanks to Himmler in which he expresses his appreciation for the great assistance provided by the Dachau experiments with human beings and his hope that other problems, namely the combination of low pressure and extreme cold, would be solved in a similar manner in the future. There must have been some mild opposition on the part of the more decent scientists to this method of investigation, as is evident from the remark by Himmler in a letter to Dr. Rascher: "People who today still disapprove of experiments on human beings, but who prefer to let brave German soldiers die from the consequence of intense cold, are to me nothing but traitors to their country and I shall not hesitate to supply the names of these people to the authorities who are in a position to take action against them." According to the report; Nov. 5, 1942 four inmates of the concentration camp for women in Ravensbrück were turned over to Dr. Rascher and his staff in Dachau. They were not supposed to be used as subjects in the chilling experiments but merely as a means of rewarming male subjects used in such experiments. In another report to Himmler Rascher stated "Up to the present I have carried out intense chilling experiments on 30 human beings by leaving them outdoors naked from nine to fourteen hours, thereby reducing their body temperatures to 27 C. [80.6 F.]. In all experiments up to the present, all subjects, despite the fact that hands and feet were partly frozen white, were successfully rewarmed within another hour." He also makes a request that he be transferred to Auschwitz, where he "could clear up the question of rewarming people frozen on dry land in a large serial experiment." In another experiment people were kept naked outdoors for fourteen hours at a temperature of 21.2 F.

Rascher and his wife were executed by shooting in April 1945, two weeks before the arrival of the Americans, on the order of Himmler, who considered Rascher too talkative and hence a dangerous source of information if he fell alive into Allied hands. A relatively small percentage of fatalities occurred among prisoners who were used for malaria experiments. However, the report indicated that there were a great number of unnecessary casualties because of the crude manner of performing experimental liver punctures by a certain Dr. Brachtl. In general, human subjects for experimental purposes were selected from the inmates of the camp in the following order: first Jews, then foreigners, Gipsies, stateless prisoners, foreign Catholic priests, professional criminals and finally political prisoners. Such group distinctions between prisoners, expressed in the form of special badges, were made in order to create group rivalry and disunity among the prisoners.

The report lists all of the participants and witnesses for the convenience of the war crime authorities.

1. Alexander, Leo: The Treatment of Shock from Prolonged Exposure to Cold, Especially in Water (Report 250), Office of the Publication Board, Department of Commerce, Washington, D. C.

because they may find that the manner in which these experiments were performed constituted a war crime. Dr. Rascher wallowed in blood and in obscenity, allowing frozen people to die in bed with naked women in order to demonstrate the relative ineffectiveness of that method of rewarming, while standing ready to measure the rectal temperature of those who recovered sufficiently to carry out sexual intercourse under those circumstances.

Out of this revolting mess of sadistic cruelty and obscenity, participated in not only by men of Rascher's caliber but by a number of men once important in the German scientific world, came a single practical suggestion, namely that rapid rewarming is more effective in the treatment of shock due to chilling than slow rewarming. Even that suggestion was not original, for it was advocated as far back as 1880 by a Russian physician.[2]

## AMYOTONIA CONGENITA (OPPENHEIM), A RARE BUT IMPORTANT ENTITY

While only 200 cases of amyotonia congenita are on record,[1] practical considerations demand a clear conception of the pathologic processes involved in this disease and its twin, Werdnig-Hoffmann's progressive muscular atrophy. The physician must be prepared to advise the anxious parents of a child with amyotonia congenita regarding the possibility of the occurrence of the disease in other children who may be born to them. The following data will prove helpful in meeting this responsibility: Amyotonia congenita is familial. Multiple cases occur among siblings, but the disease is not hereditary; the disease may occur in one of double-ovum twins or in both of identical twins. It has been observed also in triplets, two of the triplets being identical and affected with the disease, the third being of separate ovular origin and unaffected.

Along with these important clinical observations stand the following pathologic anatomic data: Hypoplasia (retardation in development and maturation), not atrophy, of a large portion of the fibers in certain voluntary muscles is regularly present; malformation of the end plates of the motor nerves appears to have been satisfactorily demonstrated; hypoplasia of the spinal motor ganglion cells is a characteristic feature; heterotopia (malformation in migration) of the ganglion cells of the spinal cord occasionally has been observed; malformations of parts of the body other than the central nervous system are common.

Correlation of these data suggests very strongly that amyotonia congenita is the result either of defective development of the fertilized ovum or of an essential biologic deficiency in one or both of the gametes. Recorded observations provide no support for a maldevelopment of the central nervous system referable to any injury to an originally normal fertilized ovum. Likewise there are no critical data to support a pathogenic theory based on continued destruction of fully formed spinal ganglion cells during fetal development. Specifically against such a theory are the following observations: Significant gliosis of the spinal cord has not been observed; recorded instances of ganglion cell degeneration may be attributed to terminal secondary pathologic processes either in the mother or in the child; progressive myelin degeneration of the anterior spinal nerve roots has not been observed. The characteristic absence of myelin sheaths may be considered a failure of development of these structures; even in cases in which the disease progresses rapidly, no inflammatory reaction has been described in the central nervous system, in the muscles or in the peripheral nerves.

In the light of these and other less essential observations, in summary, the following statements seem justifiable:

1. Amyotonia congenita may be considered a focal retardation or cessation in the development of voluntary muscles resulting from a malformation of the central nervous system involving chiefly, if not exclusively, the peripheral motor neurons. This malformation occurs in intrauterine life, most likely before the sixth month of gestation.

2. The disease not infrequently occurs in siblings but does not occur necessarily in all children of a given family.

3. Amyotonia congenita being essentially a congenital malformation fully developed and most likely completed during intrauterine life, improvement in or elimination of the basic defect is not to be expected, even though the disease may be compatible with life for a number of years.

## IMMUNOGENIC DIET

Important data on the relation of diet to natural resistance have been posthumously reported by Webster[1] of the Rockefeller Institute. Webster and his associate had available for this work five inbred strains of mice. Each strain had been reared under strictest quarantine conditions for at least ten years. They sought first the selection of a natural food that would best support the normal physiologic welfare of mice. Following suggestions of earlier investigators[2] they tested the nutritional properties of various whole grain cereals (66 per cent) in combination with 33 per cent whole dried milk and 1 per cent sodium chloride. The cereals tested were wheat, corn, rye, oats and rice, with desiccated potato tested as a control.

2. Laptschinski in Russkiy Vrach, abstracted in Zentralblatt für Chirurgie in 1880, quoted by Major Leo Alexander.

1. Burdick, W. F.; Whipple, Dorothy V., and Freeman, Walter: Amyotonia Congenita (Oppenheim): Report of 5 Cases with Necropsy; Discussion of the Relationship Between Amyotonia Congenita, Werdnig-Hoffman Disease, Neonatal Poliomyelitis and Muscular Dystrophy, Am. J. Dis. Child. **69**: 295 (May) 1945.

1. Schneider, H. A., and Webster, L. T.: J. Exper. Med. **81**: 359, 1945. Dr. Webster died July 12, 1943.

2. Schwarz, E., and Schwarz, H. K.: J. Mammal. **24**: 59, 1943. McCollum, E. V., in Nelson Loose-Leaf Medicine **7**: 162, 1920.

Inspection of the life cycle data of various groups of weanling Swiss mice revealed that, when growth, fertility, fecundity, ability to rear young and growth of those young were used as criteria, the most satisfactory overall diet was the whole wheat-dried milk-salt mixture. Corn and rye were next in order. Rice was less satisfactory, having especially poor ability to support the rearing of sucklings. Potato and oats were equally inadequate on several counts, notably in the extremely poor growth of the progeny. Infection tests performed when the progeny were 5 weeks of age showed that the potato and oats fed progeny were hypersusceptible to experimental Salmonella enteritidis infection. Progeny fed on the other grains were of approximately equal resistance. As a result of these tests the whole wheat-whole milk diet was selected as the "natural" dietary point of resistance.

Weanling Swiss mice were reared on this "natural" diet, with an equal number of controls reared on a synthetic diet containing all known food essentials in as pure a state as possible. This synthetic diet contained all known vitamins at levels well above minimal requirements. The "natural" and synthetic diets were approximately equal in supporting growth. Comparison of their effects on natural resistance were made by inoculating each mouse by means of a stomach tube with 50,000 S. enteritidis bacilli. Of 293 mice reared on the "natural" diet 194 survived this infection, a survival rate of 66.2 per cent. Of 296 mice on the synthetic diet there were only 120 survivors, a survival rate of but 40.5 per cent. The test was repeated with a tenfold dose of S. enteritidis (500,000 bacilli). The average survival rate for mice on the "natural" diet was 37.5 per cent. On the synthetic diet the survival rate was but 17.7 per cent.

In both series the natural resistance was maintained at a higher level on the whole wheat-dried milk diet than on the best synthetic diet now available. In a search for the factors involved in this superiority, groups of mice were fed various combinations of synthetic diet and "natural" foods. Inoculation tests showed that the greater natural resistance of mice subsisting on the "natural" food was due to the whole wheat it contained, dried milk contributing nothing to this immunogenic effect. The physical or chemical nature of the whole wheat immunogen is not yet determined.

Several by-products of this research are of suggestive clinical interest. First, it was found that the resistance of females is less than that of males on all diets thus far tested. Thus, with the average survival rate of 40.5 per cent on the synthetic diet, the male survival rate was 51.0 per cent and the female rate but 29.9 per cent. Differences were also noted in different inbred strains of mice. With strains of mice of high hereditary resistance the immunogenic effect of the whole wheat diet was less pronounced than with strains of low hereditary resistance.

Whether or not the whole wheat immunogen is equally effective against organisms other than S. enteritidis or with portals of entry other than the gastrointestinal tract has not yet been determined. The relative titers of different types or grades of wheat and the effects of cooking also have not yet been reported. Evidently, however, Webster introduced a new test for nutritional efficiency which may have important applications to future research in clinical medicine and animal husbandry.

## Current Comment

### CONGENITAL DEFECTS FOLLOWING MATERNAL RUBELLA

From 1937 to 1942 rubella was widely prevalent in Australia. Gregg [1] and others [2] have reported the occurrence of grave eye, ear, cardiac and other congenital defects in the children born during these years of mothers who had rubella during the early months of pregnancy. At present this appears to be the first time that such defects have been recorded in connection with rubella. The virologist Burnet writes [3] that the defects "may represent the development of a new capacity on the part of the virus, but more probably it is only a reflex of the unusual opportunity presented to the virus by the existence of a large young adult population susceptible to infection." The startling Australian reports were soon followed by reports of cases in this country of congenital defects following maternal rubella early in pregnancy.[4] Instances have been observed in England also.[5] While the strange power of rubella to cause congenital defects is not limited to Australia, the possibility cannot be excluded that the Australian virus may have been introduced into this and other countries. The production by Hiro and Tasaka [6] and by Habel [7] of rubella in monkeys on inoculation of blood and nasal washings from early stages of the human disease has established quite clearly that rubella is a virus infection. The virus can be cultivated on the chorioallantoic membrane of the chick embryo.[7] These results warrant further work now much needed in the hope it may lead not only to a better understanding of the genesis of congenital malformations in general but also to means of preventing the tragic effects of rubella in early pregnancy. The importance of rubella in this respect cannot be overstated. On the basis of the facts then at hand Swan [2] estimated that practically all

1. Gregg, N. M.: Congenital Cataract Following German Measles in the Mother, J. Ophth. Soc. Australia **3**: 35, 1942.
2. Swan, Charles; Tostevin, A. L.; Moore, Brian; Mayo, Helen, and Barham Black, G. H.: Congenital Defects in Infants Following Infectious Diseases During Pregnancy, M. J. Australia **2**: 201 (Sept. 11) 1943.
3. Burnet, Frank M.: Virus as Organism, Cambridge, Mass., Harvard University Press, 1945.
4. Albaugh, C. H.: Congenital Anomalies Following Maternal Rubella in Early Pregnancy, J. A. M. A. **129**: 719 (Nov. 10) 1945. Altmann, Franz, and Dingmann, Albert: Congenital Deafness and Cataract Following Rubella in Mother, Arch. Otolaryng. **42**: 51 (July) 1945. Conte, W. R.; McCammon, C. S., and Christie, A.: Congenital Defects Following Maternal Rubella, Am. J. Dis. Child. **70**: 301 (Nov.-Dec.) 1945.
5. Rubella and Congenital Malformations, Lancet **2**: 19 (July 7) 1945.
6. Hiro, Y., and Tasaka, S.: German Measles is a Virus Disease. Monatschr. f. Kinderh. **76**: 328, 1914.
7. Habel, Karl: Transmission of Rubella to Macacus Mulatta Monkeys, Pub. Health Rep. **57**: 1126 (July 31) 1942.

children of mothers who have rubella in the first two months of pregnancy and 50 per cent of those having it in the third month will be defective. The frequency of malformation after rubella in pregnancy is a matter for careful investigations under different conditions. In Milwaukee Fox and Bortin [8] found that of five women who had rubella in the first two months of pregnancy only 1 gave birth to an abnormal child (stillborn and hydrocephalic). There can be no question that special efforts must be made to prevent rubella in early pregnancy. At this time all contacts with persons suffering from rubella must be avoided, especially by the woman who has not had the disease. Perhaps specific means of prevention will become available.

## HEARINGS ON S. 1606 SCHEDULED

The Senate Committee on Education and Labor has scheduled hearings on S. 1606, the second 1945 version of the Wagner-Murray-Dingell bill, to commence on Monday, March 18, at 10 a. m. These hearings will last, it is reported, for about a month, and plans are being completed so that the Association will be adequately represented during the course of the hearings. Senator Murray, Montana, the co-sponsor of the bill, is chairman of the committee, and the other members, together with the states they represent, are as follows:

Senator George D. Aiken, Vermont
Senator Joseph H. Ball, Minnesota
Senator Dennis Chavez, New Mexico
Senator Forrest C. Donnell, Missouri
Senator Allen J. Ellender, Louisiana
Senator J. William Fulbright, Arkansas
Senator Joseph F. Guffey, Pennsylvania
Senator Lister Hill, Alabama
Senator Olin D. Johnston, South Carolina
Senator Robert M. LaFollette Jr., Wisconsin
Senator Wayne Morse, Oregon
Senator Claude Pepper, Florida
Senator H. Alexander Smith, New Jersey
Senator Robert A. Taft, Ohio
Senator Elbert D. Thomas, Utah
Senator James M. Tunnell, Delaware
Senator David I. Walsh, Massachusetts

The House Committee on Ways and Means began public hearings on the subject of social security on February 25. The first 1945 version of the Wagner-Murray-Dingell bill is still pending before this committee and may be considered during the course of these hearings. Present indications are, however, that the initial hearings will be on the old age and survivors' insurance provisions of the Social Security Act and thereafter will extend progressively to other phases of the act, such as old age assistance, aid to dependent children, aid to the blind, general assistance and unemployment compensation. These hearings will consider the report of the committee's social security technical staff, recently submitted to the committee under the title "Issues in Social Security," which does not cover the problem of medical care in its broad application but does refer to the need of providing medical care to the recipients of public assistance, the aged, the dependent children and the blind.

8. Fox, M. J., and Bortin, M. M.: Rubella in Pregnancy Causing Malformations in Newborn, this issue, p. 568.

## TEMPORARY APPROVAL OF RESIDENCIES

Many hospitals are rapidly developing new educational programs at the residency level to meet the needs of returning medical officers who are seeking such work in large numbers. It has been deemed wise by the Council on Medical Education and Hospitals of the American Medical Association and by the executive committee of the Advisory Board for Medical Specialties to inaugurate a plan to facilitate at least temporary approval of new residencies. The plan proposed by these bodies is described elsewhere in this issue. This program should contribute materially to meeting the educational demands during this acute emergency. Temporary approval of a hospital in the manner described will protect such residents as may be enrolled in the educational program of the hospital so far as credit toward specialty board certification is concerned. Every effort will be made by representatives of the Council and the boards to be reasonably sure that subsequent inspection of the residency will reveal that the program warrants regular approval. The judgment of the Council and of the boards will be based on a careful study of the personnel, hospital statistics and educational program outlined by the hospital on making application for approval to the Council. The proposal has met with approval by a number of the boards. Most of them have already indicated that they will collaborate in this project. It is probable that most, if not all, of the remaining American boards will likewise participate.

## HYPERSENSITIVITY RHEUMATIC FEVER

One concept of the etiology of rheumatic fever involves hypersensitivity. Aikawa [1] has recently reviewed the evidence in favor of this hypothesis. He points out that the nature of the antigen-antibody reaction has been firmly established on an experimental biochemical basis. The question of the relationship between immunity and allergy remains unsolved, however. Attempts to treat rheumatic fever on the basis of the desensitization theory have so far yielded equivocal results. The hypersensitivity theory of the causation of the rheumatic fever and the rationale of attempted desensitization may or may not be confirmed by subsequent investigations. In any event Aikawa deserves credit for his careful review of the evidence on this subject to date.

## CONTINUATION COURSES

Elsewhere in this issue the Council on Medical Education and Hospitals of the American Medical Association presents a supplementary list of continuation courses. On Dec. 8, 1945 THE JOURNAL contained a long list of such courses being offered throughout the country for the period Jan. 1 to July 16, 1946. Because of the heavy demands for such work, many institutions have accelerated their plans for short courses and have reported considerable numbers of them since January. Further supplementary lists will be published as the need arises before the regular semiannual compilation, which will appear early in July.

1. Aikawa, Jerry K.: Hypersensitivity and Rheumatic Fever, Ann. Int. Med. **23**: 969 (Dec.) 1945.

hereditary resistance.

7. Habel, Karl: Transmission of Rubella to Macacus Mulatta Monkeys, Pub. Health Rep. **57**: 1126 (July 31) 1942.



# MEDICINE AND THE WAR

## NAVY

### TRAINING IN AVIATION MEDICINE

The Bureau of Medicine and Surgery, Navy Department, Washington, D. C., recently made an urgent request for application for training in aviation medicine. This training leads to the designation of Naval Flight Surgeon, and eligibility is limited to medical officers of the rank of lieutenant commander or below.

The School of Aviation Medicine is conducted at the Naval Air Station, Pensacola, Fla. Classes are formed on an average of every four months, one having started in February. Two months' instruction is offered in applied aviation physiology, eye, ear, nose and throat, psychiatry and certain other subjects. Students are then assigned to flight indoctrinational training and ground school work for six weeks. On completion of the training program the student is designated as naval flight surgeon and receives his wings.

### VOLUNTEERS TO BE TRAINED IN MEDICAL STATISTICS

The Bureau of Medicine and Surgery, Washington, D. C., recently issued a call for volunteers to be trained in the specialty of medical statistics. Capt. Fred R. Lang, chief of the Division of Statistics, has arranged for instruction of interested medical officers at the School of Hygiene and Public Health, Johns Hopkins University, Baltimore.

Unless a heavy registration necessitates an earlier, more concentrated course, the training program in medical statistics will begin on September 1. All interested medical officers of the Regular Navy are urged to send in their applications to the chief of the Bureau of Medicine and Surgery at the earliest possible date.

### COMMODORE JOHN C. ADAMS PRESENTED THE JOHN JEFFRIES AWARD

The John Jeffries Award was recently presented to Commodore John C. Adams, New York, "for outstanding contributions to the advancement of aeronautics through medical research." Commodore Adams graduated from the University of Alabama School of Medicine, University, in 1917 and was appointed Lieutenant (jg), Medical Corps of the U. S. Navy, in 1917. He completed training as a flight surgeon at the Army School of Aviation Medicine in 1923, and since that time his interests have been primarily confined to aviation medicine.

### NAVY AWARDS AND COMMENDATIONS

#### Rear Admiral William John Clarke Agnew

Rear Admiral William J. C. Agnew, assistant chief of the Bureau of Medicine and Survey, Navy Department, was recently awarded the Legion of Merit "for exceptionally meritorious conduct in the performance of outstanding services to the government of the United States as director of personnel, including the Medical Corps, Hospital Corps and Nurse Corps, from the beginning of the emergency to Nov. 24, 1944 and as assistant chief of the bureau from Nov. 25, 1944 to the surrender of the Japanese empire." According to the citation accompanying the award "by his dynamic leadership and his competence in handling problems of the greatest complexity during a period when the demand for medical officers and nurses was rising steadily, Rear Admiral Agnew was able to coordinate the recruiting and training of medical personnel in departmental duties, thereby insuring expeditious assignment to ships, advance bases and hospitals throughout the world as well as to the shore stations and hospitals at home. Serving as assistant chief of the bureau, he bore the entire responsibility for the operation of the Medical Department of the Navy during the absence of the Surgeon General and, by his quick grasp of essentials, his inherent ability to make immediate and correct decisions and his calm performance of duty under stress, contributed vitally to the successful operation of the Medical Department." Dr. Agnew graduated from the University of Vermont College of Medicine, Burlington, in 1914 and entered the service June 2, 1917.

#### Commander Julius M. Amberson

The Distinguished Service Medal was recently awarded to Comdr. Julius M. Amberson, formerly of Corpus Christi, Texas, "for exceptionally meritorious service to the government of the United States in a duty of great responsibility as medical officer in command of Epidemiology Unit No. 50, operating in Egypt, Lebanon, Turkey and East and South Africa over an extended period of time." The citation accompanying the award stated that, "obtaining protocols to establish the official presence of his unit in the East, Middle East and Africa, Commander Amberson conducted pioneer research in the treatment of Asiatic cholera and relapsing fever, developing the unit into a potent force in the control of endemic diseases, a source of sound basic research and creator of good will toward the United States. He maintained effective liaison with the United States Typhus Commission stationed in Egypt and later assumed responsibility for the commission's duties, equipment and continuing clinical investigations. In addition, he demonstrated the value of penicillin in treating the victims of relapsing fever. Introducing a revolutionary cure for Asiatic cholera after extensive and painstaking scientific and medical development, Commander Amberson applied this treatment in 500 cases of this ordinarily fatal disease and, by his efforts, prevented the loss of a single life in the test group, thereby bringing to mankind a new method of treatment which will undoubtedly save the lives of untold thousands in the years to come. Through his professional skill, administrative ability and great scientific motives maintained despite his continual exposure to fatal endemic diseases, Commander Amberson has made an outstanding contribution in the field of medical research, and his unwavering devotion to an important assignment reflects the highest credit on himself and the United States Naval Service." Dr. Amberson graduated from Rush Medical College, Chicago, in 1927 and entered the service Sept. 24, 1942.

#### Captain Don S. Knowlton

A gold star in lieu of a second Legion of Merit was recently awarded to Capt. Don S. Knowlton, Washington, D. C., for exceptionally meritorious conduct in the performance of outstanding services as division surgeon of a Marine infantry division during the planning for and conduct of operations against the Japanese enemy on Okinawa, Shima, Ryukyu Islands during the period from April 1 to June 21, 1945. "During the preparatory phase of the operation," stated the citation, "Captain Knowlton, with untiring efforts, supervised the organization and training of the medical battalion within the division. With keen technical skill and professional ability he trained his command to a high state of readiness for amphibious operations. During the assault phase of the operation the medical companies under his direction kept constantly in contact with the advancing front lines troops, offering prompt and efficient medical aid and surgical treatment to those wounded or injured in action. The ability of the individual corpsmen, the capabilities of the unit medical officers, the efficiency of the medical organization, the promptness of the evacuation of wounded, all attested to his brilliant leadership. Throughout the entire operation he demonstrated an extremely high degree of professional knowledge both as a member of the medical profession and as a naval officer. He kept constantly in touch with the rapidly changing tactical situation so that he might better employ the men of his command. His sound judgment, both tactically and medically, his

Malformations in Newborn, this issue, p. 568.

Int. Med. 23:969 (Dec.) 1945.



inspiring leadership and his intense devotion to duty were ever an inspiration to the men of the division and aided materially in the furtherance of the operation. His actions throughout were in keeping with the highest traditions of the United States Naval Service." Dr. Knowlton graduated from Tufts College Medical School, Boston, in 1921 and entered the service Nov. 5, 1940.

### Captain Theodore R. Meyer

The Cross of the Order of Taxiarchis was recently awarded to Capt. Theodore R. Meyer, Sag Harbor, L. I., N. Y., for services rendered to the population of Greece. Captain Meyer recently returned from Greece after ten months' duty as officer in charge of a special Navy epidemiologic unit formed at the request of the Greek government for the purpose of improving public health conditions in that formerly enemy occupied country. The unit that Captain Meyer headed, comprising four officers and ten hospital corpsmen, worked in close cooperation with the Greek Ministry of Health. Education of native physicians and technicians in the uses and administration of penicillin was undertaken. The epidemiologic unit established a school for instruction in laboratory procedures, conducted surveys of sanitary conditions in restaurants and other food handling establishments in the Athens-Piraeus area, instituted malaria control measures on small islands off the coast of Greece and furnished assistance, including the loan of equipment and materials, to the government's hygiene school. Dr. Meyer graduated from the Medical College of the State of South Carolina in 1924 and entered the service April 1, 1941.

With the generous cooperation of certain American citizens of Greek descent, Captain Meyer's unit has arranged for two Greek doctors to come to the United States for specialized study at the National Navy Medical Center, Bethesda, Md.

### Lieutenant Commander Francis X. Sommer

Lieut. Comdr. Francis X. Sommer, formerly of Ashburnham, Mass., was recently commended "for distinguishing himself by excellent service as medical officer for the Commander Manila-Subic Harbor Clearance Group. On Aug. 11, 1945 a U. S. Army diver, having completed a dive in Mariveles Harbor, Luzon, Philippine Islands, experienced a severe case of bends. Lieutenant Commander Sommer diagnosed the critical condition of the man, used improvised equipment from enemy stores and then worked continuously for a period of more than two days until the patient was restored to health. For his outstanding performance of his duties he is commended and authorized to wear the Commendation Ribbon." Dr. Sommer graduated from Yale University School of Medicine in 1940 and entered the service July 1, 1941.

### Commander Maksymiljan Robert Gelber

Comdr. Maksymiljan Robert Gelber, Aberdeen, S. D., was recently commended "for distinguishing himself by excellent service as senior medical officer of the Escort Carrier U. S. S. *Hoggatt Bay* during operations against the enemy in the Luzon (Manila-Lingayen) campaign, Philippine Islands, Jan. 1-23, 1945. During this entire period, by his skill and devotion to duty the general health of the crew was maintained at a remarkably high level. When a deck explosion occurred, Commander Gelber's department was so well organized that they not only handled the casualties in an outstandingly efficient manner but also effected a plan to lower stretcher cases to sick bay. For his conduct throughout he is commended and authorized to wear the Commendation Ribbon." Dr. Gelber graduated from the University of Minnesota Medical School, Minneapolis, in 1926 and entered the service May 15, 1941.

## MISCELLANEOUS

### AMERICA TYPHUS COMMISSION AWARDS

#### Dr. William W. Bolton

On February 13 Dr. William W. Bolton, assistant director of the Bureau of Health Education of the American Medical Association, Chicago, was presented with the United States of America Typhus Commission Medal in recognition of noteworthy service rendered in the control of typhus in Germany during the period March 6, 1945 to June 14, 1945. The presentation was made by Brig. Gen. John A. Rogers, U. S. Army, chief surgeon, Sixth Service Command. Dr. Bolton, who graduated at Jefferson Medical College in 1930, entered the Army of the United States July 1, 1945. His service terminated Jan. 13, 1946 with the rank of captain. While in Germany Dr. Bolton was in charge of a typhus team that was responsible for locating and isolating all persons with the disease.

#### Dr. Leonard A. Scheele

Dr. Leonard A. Scheele, senior surgeon, U. S. Public Health Service, was recently awarded the United States of America Typhus Commission medal for "exceptionally meritorious service" which helped prevent the spread of typhus in northwestern Europe during 1944-1945. Dr. Scheele served in the Mediterranean and European theaters of operation from May 1943 to September 1945 while on temporary duty with the Army Medical Department. As chief of the preventive medicine section, Public Health Branch, he took an important part in the development of policies, the determination of principles and the accumulation of supplies essential for typhus control among refugees and displaced persons in Germany and in allied countries of northwestern Europe. On his return from Europe Dr. Scheele resumed his activities with the Public Health Service and is now assistant chief of the National Cancer Institute at Bethesda. He was a consultant on cancer control at the institute for a number of years prior to his first wartime assignment in December 1942, which placed him with the Office of Civilian Defense as deputy for field medical operations.

Dr. Scheele joined the regular corps of the Public Health Service in July 1934. He graduated from Wayne University College of Medicine, Detroit, in 1934.

### MEDICAL AND SURGICAL RELIEF COMMITTEE

The Medical and Surgical Relief Committee (420 Lexington Avenue, New York 17) in its annual report for 1945 announced through Mr. George L. Knoll, chief of procurement and distribution, that pharmaceutical supplies contributed during the year amounted to $29,859.99. The Medical and Surgical Relief Committee donates medical, surgical and dental supplies to meet authentic appeals from hospitals, missions and welfare organizations in all parts of the world. The fine cooperation of supply houses has enabled the committee to send otherwise unobtainable supplies to Italy, Greece, Africa, France, Korea, Czechoslovakia, the Netherlands, China, Nicaragua, Bolivia and Central America during the past year. In most of these areas doctors and dentists have been helpless to combat disease because of the complete lack of equipment. The Medical and Surgical Relief Committee meets emergencies of this kind by sending quickly enough basic material and instruments to permit clinical routine to be reestablished. Only those organizations which supply free service to patients are assisted.

### UNRRA NEWS

#### Yugoslav Doctor to Study Latest Serum Technics in London

The United States Relief and Rehabilitation Administration, Washington, D. C., recently sent Dr. Mirke Stanic, Yugoslav serologist, to London to study the latest serology methods, according to a Belgrade report to the Washington headquarters of UNRRA.

The fullest use is now being made in Yugoslavia of UNRRA-supplied penicillin. At a recent meeting of the Yugoslav Federal Penicillin Center and the Belgrade Medical Society, special mention was made of the success of penicillin treatment in Yugoslavia and of the invaluable assistance given the country by the Health Division of the UNRRA Mission there.

Steps to forestall the introduction of bubonic plague also are being taken by the Sanitary Engineering Section of the UNRRA Mission, and preventive measures are being concentrated at ports on the Dalmatian coast.

# PHYSICIANS SEPARATED FROM SERVICE

## ARMY MEDICAL CORPS OFFICERS RECOMMENDED FOR/OR RELIEVED FROM ACTIVE DUTY

### California

Argens, Richard G., Capt., Napa State Hospital, Napa.
Arons, Joseph J., Major, Mt. Zion Hospital, San Francisco.
Avakian, Edward V., Major, 5009 Varna Ave., Los Angeles.
Blatherwick, Norman H., Capt., 3734 Olmsted, Los Angeles.
Bonfilio, Nicholas D., Capt., 810 Union St., San Francisco.
Brothers, Ridway H., Major, Alameda County Hosp., Oakland.
Burke, Simpson S., Jr., Capt., 1026 Tiverton Ave., Los Angeles.
Carlson, Elmer O., Capt., 320 Rosewood Ct., Ontario.
Chier, Reuben D., Capt., 600 N. Laurel Ave., Los Angeles.
Cook, Alfred L., Capt., 1009 W. 25th St., Los Angeles.
Disney, Edward K., Major, Vet. Adm., San Fernando.
Duncan, Herbert A., Major, 2900 Blanche St., Pasadena.
Eggleston, John R., Capt., 427 9th St., Santa Monica.
Ellenbogen, Leonard S., Major, Vet. Admin. Hospital, W. Los Angeles.
Feichtmeir, Thomas V., Capt., 212 Frisbie St., Oakland.
Freeman, Robert G., Major, 2170 Homet Road, San Marino.
Goddard, Chester R., Capt., 633 W. Maple St., Orange.
Gogol, Louis J., Capt., 2190 Talmadge St., Los Angeles.
Goodman, Max J., Major, 918 F St., Eureka.
Guernsey, Chester M., Major, 336 Broadway, Chico.
Leverton, William R., Lt. Col., Vet. Adm., San Fernando.
Levin, Edward, Capt., 5421 Dahlia Drive, Los Angeles.
McGuire, Frank A., Major, 730 N. Lincoln St., Stockton.
McKibbin, John, Capt., 353 W. Manchester, Los Angeles.
Maxwell, H. C., Lt. Col., 210 W. Santa Clara Ave., Santa Ana.
Mello, Henry G., Major, 2335 Clement Ave., Alameda.
Meltzer, Abe M., Capt., 244 Granada Ave., San Francisco.
Morgan, John Daniel Jr., Col., Bank of America Bldg., Fresno.
Murphy, John A., Capt., 1850 Sharon Pl., San Marino.
Olney, Millard P., Capt., 3875 Wilshire Blvd., Los Angeles.
Pray, Ralph E., Major, 416 Salinas Nat. Bank, Salinas.
Prisinzano, Gandolfo A., Capt., 1001 40th St., Sacramento.
Reeves, David L., Lt. Col., 306 E. Los Olives, Santa Barbara.
Rosser, Bernard H., Capt., 5029 Clinton St., Los Angeles.
Rothmann, Hans, Capt., 1755 Jackson St., San Francisco.
Rubinstein, Morris, Capt., Vet. Admin. Facility, Livermore.
Shear, Sidney P., Capt., 1680 N. Vine St., Los Angeles.
Skeoch, Gordon D., Capt., 312 N. Boyle St., Los Angeles.
Smith, William G., Major, 1332 Santa Barbara St., Santa Barbara.
Steinman, Morris J., Capt., 127 N. Flores St., Los Angeles.
Stern, Robert L., Capt., 414 N. Orange Dr., Los Angeles.
Strouse, Carl D., Capt., 955 N. Kings Road, Hollywood.
Swerdloff, Harold, Capt., Box 242, L. A. Co. G. H., Los Angeles.
Taylor, Charles M., Major, 2007 Wilshire Blvd., Los Angeles.
Tragerman, Leon J., Capt., 1750 N. Serrano Ave., Los Angeles.
Wilson, Kent R., Capt., 11-12 Carrillo Bldg., Santa Barbara.
Wright, Ralph W., Major, Atherton Ave., Atherton.

### Colorado

Arndt, Karl F., Capt., 3100 E. Exposition Ave., Denver.
Bartholomew, Jack D., Major, 701 7th St., Boulder.
Bershof, Edward, Capt., 370 Birch St., Denver.
Blatherwick, Robert, Capt., 4200 E. 9th Ave., Denver.
Doty, Horace W., Jr., Capt., Vet. Adm. Facility, Ft. Lyon.
Echternacht, Evan E., Capt., 1930 S. Josephine St., Denver.
McGlone, Frank B., Major, 1000 S. Logan St., Denver.
Nims, Marshall G., Capt., Metropolitan Bldg., Denver.
Oxman, Albert C., Lt. Col., 1509 Decatur St., Denver.
Rogers, Anthony S., Capt., Box 136, Ft. Collins.
Sherwood, Robert O., Capt., 1026 Washington St., Denver.

### Connecticut

Antell, Maxwell J., Capt., 763 Noble Ave., Bridgeport.
Biondi, Benedict, Capt., 120 Blatchley Ave., New Haven.
Buck, Burdette J., Major, 25 Cumberland St., Hartford.
Couture, Arthur J., Capt., 19 S. Main St., Moosup.
Crocker, David, Capt., 215 Bishop St., New Haven.
D'Ambruoso, Dominic C., Capt., 2104 Chapel St., New Haven.
D'Amico, Michael, Lt. Col., Middletown Ave., Clintonville.
Friedberg, Isadore H., Capt., Newington.
Harper, Paul A., Lt. Col., Old Orchard Park, Fairfield.
Lukoski, Walter A., 1st Lt., 52 Spring Garden Ave., Norwich.
McMahon, John D., Capt., Washington St., South Norwalk.
Perham, William S., Major, Newton Road, Woodbridge.
Phillips, Harry S., Major, 44 Church Lane, Westport.
Sullivan, Arthur B., Capt., 637 Park Rd., West Hartford.
Sutherland, Francis A., Lt. Col., 24 Mason St., Torrington.

### District of Columbia

Burgess, Forbes H., Capt., 2505 13th St., NW, Washington.
Daily, Edwin F., Major, 4926 Albemarle St., Washington.
Hannan, Francis P., Capt., 1741 Church St., N.W., Washington.
Holtzmann, Saul, Capt., 6040 13th Pl., N.W., Washington.
Jenkins, Frank A., Capt., Gallinger Municip Hosp., Washington.
Litvin, Philip, Major, 3433 14th St., NW, Washington.
McNitt, Henry J. R., Major, 1835 Eye St., N.W., Washington.
Martin, George V., Jr., Major, 2909 Rittenhouse St., Wash.
Mattingly, Thomas E., Major, 2200 R. I. Ave., N.E., Wash.
Williams, Virgil B., Lt. Col., 3624 Davis St., N.W., Washington.

### Georgia

Cohen, Jonathan, Capt., Central of Ga. Railway Hospital, Savannah.
Cressy, Norman L., Major, Harden Road, Atlanta.
McArthur, Charles E., Major, 216 11th Ave., Cordele.
McCarver, William C. Jr., Capt., Vidette.
Powell, Cuthbert E., Capt., Swainsboro.
Taranto, Morris B., 1st Lt., 425 10th St., N.E., Atlanta.
Thomas, Henry W., Jr., Major, Grady Hospital, Atlanta.
Wilcox, Everard A., Lt. Col., 1345 Greene St., Atlanta.

### Idaho

Barnes, John F., Capt., Anderson Ranch Dam, Mt. Home.
Beck, Wilford W. Jr., Capt., 187 N. University, Blackfoot.
Davis, Ralph E., Major, Vet. Adm., Boise.
Dewey, Carroll W., Capt., Fort Hall Agency, Fort Hall.
Ellsworth, Preston B., Jr., Capt., Smith Bldg., Idaho Falls.

### Illinois

Allen, Melvin A., Capt., 315 N. Oak, O'Fallon.
Anderson, Cyril W., Capt., 305 S. Clinton Ave., Oak Park.
Anderson, Kenning M., Capt., 605 N. Taylor Ave., Oak Park.
Barnai, Andrew P., Capt., 2319 W. Devon Ave., Chicago.
Barnard, Robert D., Capt., 4404 Drexel Blvd., Chicago.
Becker, Carl M., Capt., 54 N. Stewart Ave., Freeport.
Bedessem, Philip M., Lt. Col., 5230 Magnolia Ave., Chicago.
Beecher, Merrill C., Capt., 503 E. Main St., Knoxville.
Blaurock, M. F., Lt. Col., 1423 N. Williams St., River Forest.
Bond, Ian H., Capt., 6153 S. Mayfield Ave., Chicago.
Bonick, Thos. J., Capt., 1410 Vincennes Ave., Chicago Heights.
Borden, George, Capt., Mendon.
Brown, Francis, Capt., 201 Richman, Villa Grove.
Brown, Grover C., Capt., 1025 North St., Peoria.
Butner, Wendell B., Major, 904 W. Adams St., Chicago.
Chesnut, Nelson H., Major, 1604 W. Cook St., Springfield.
Ciulini, Fausto, Major, 6144 S. Kenneth Ave., Chicago.
Cohen, Melvin R., Capt., 520 Stratford Pl., Chicago.
Costigan, Clarence S., 1st Lt., 2028 7th Ave., Moline.
Delfosse, John F., Capt., 4073 Waveland Ave., Chicago.
DeWhirst, Ernest M., Major, 873 Fairchild St., Danville.
Dorsey, Dennis B., Capt., 2051 Sedgwick St., Chicago.
Dorton, Howard E., Major., 7200 Oak Ave., River Forest.
Entin, Samson D., Major, 3059 Ainslie, Chicago.
Eveloff, Abe R., Capt., East Hazel Dell, Lake Springfield.
Faden, Gerson, Capt., 123 N. Main St., Moweaqua.
Fell, Egbert H., Major, 7357 Merril Ave., Chicago.
Fioretti, Carlo A., Capt., 14926 Center Ave., Harvey.
Fireman, Joseph, Capt., 1032 E. 43d St., Chicago.
Fitzmaurice, Harry A., Capt., 8131 S. Evans Ave., Chicago.
Fonner, Robert M., Major, 3225 N. Laramie Ave., Chicago.
Goldenberg, Max, Major, 234 Collinsville Ave., East St. Louis.
Gondek, Frank R., Capt., 1442 S. Michigan Blvd., Chicago.
Goode, Delmar, Col., Vet. Adm., Downey.
Greenwood, Lilburn S., Lt., Col., Rockford.
Grizzaffi, Anthony L., Capt., 1823 W. Garfield Blvd., Chicago.
Grossman, Edward S., Capt., 3319 Cullom Ave., Chicago.
Grossman, Harry D., Capt., 7952 Eberhart Ave., Chicago.
Hamilton, George R., 1st Lt., Hartsburg.
Hamilton, Henry E., Capt., 716 N. East Ave., Oak Park.
Hawthorne, Roy O., Lt. Col., 512 S. Chicago, Kankakee.
Holden, Alwin J., Lt. Col., 6424 Newgard Ave., Chicago.
Holtz, William E., Capt., 2955 N. Moody Ave., Chicago.
Hubner, Charles F., 1st Lt., 9130 Fairview Ave., Brookfield.
Hultgen, Francis J., Capt., 1518 Garfield Blvd. W., Chicago.
Hurwich, Arthur R., Capt., 3704 Lawrence Ave., Chicago.
Jack, Nelson B., Capt., 134 W. Prairie Ave., Decatur.
Jeffries, Milo E., Capt., 5842 Stony Island Ave., Chicago.
Kaplan, Sidney J., Capt., Cook County Hospital, Chicago.
Kayne, Jerry, Major, 2647 N. Talman Ave., Chicago.
Krause, Charles D., Lt. Col., 1819 W. Polk St., Chicago.
Leavitt, Samuel S., Capt., Orland Park.

# PHYSICIANS SEPARATED FROM SERVICE

### Illinois—Continued

Leroy, George V., Lt. Col., 1713 W. 95th St., Chicago.
LeVan, Franklin P., Capt., 8322 S. Throop St., Chicago.
Levine, Howard J., Capt., 5507 Gladys Ave., Chicago.
McNertney, Francis D., Major, 1417 N. Main St., Bloomington.
McRae, Louis A., Capt., 612 Myers Bldg., Springfield.
Makart, Carl D., Major, 1123 Noble St., Chicago.
Manelis, Samuel L., Capt., 917 S. Independence Blvd., Chicago.
Matzkin, Lloyd L., Capt., 1349 S. Keeler Ave., Chicago.
Matzner, Irving A., Capt., 6139 N. Mozart St., Chicago.
May, Martin M., Capt., 512 S. Market St., Marion.
Merar, Thos. James, Major, 8 S. Michigan Blvd., Chicago.
Miller, Walter U., Capt., 15 Milburn Ave., Crete.
Millet, Roscoe F., Major, 232 E. Jackson, Macomb.
Mindrup, Robert G., Capt., 802 W. Carpenter S., Jerseyville.
Mongeau, Donald C., Capt., 8131 S. Vernon Ave., Chicago.
Moore, Bert E., Major, 813 Chandler, Danville.
Morris, Charles I., Capt., 555 Surf St., Chicago.
Murphy, Raymond B., Major, Cook County Hosp., Chicago.
Nelson, Lorenzo R., Major, 4734 South Parkway, Chicago.
Nierenberg, Paul S., 1st Lt., Albion.
Oden, Joshua Jr., Capt., 4108 N. Harding Ave., Chicago.
Olmsted, Randolph F., Col., 100 S. Prospect Ave., Park Ridge.
Orndorff, John R., Capt., 1044 Forest Ave., River Forest.
Parker, Forest C., Major, 8 Center St., Danville.
Petrazio, Joseph A., Capt., Ava.
Peven, Philip S., Capt., Michael Reese Hospital, Chicago.
Phibbs, Brenden P., Major, 675 Blackthorne Road, Winnetka.
Potts, Willis J., Col., 619 Fair Oaks Ave., Oak Park.
Pritikin, Roland I., Lt. Col., 927 N. Court St., Rockford.
Raymond, Sidney W., Lt. Col., 1506 Franklin Ave., River Forest.
Rayson, Edwin H., Capt., Grant St., Earlville.
Reeder, Clifton L., Major, 1306 Walnut, Eldorado.
Robbins, Fred P., Capt., 3816 W. Wrightwood Ave., Chicago.
Rodriguez, Antonio, Lt. Col., Vet. Admin. Hospital, Downey.
Rosenblum, Alfred H., Major, 4721 N. Central Park, Chicago.
Rosenthal, Martin J., Major, 1225 N. Marquette, LaSalle.
Rubin, Harold X., Capt., 3610 Douglas Blvd., Chicago.
Rudens, Maurice C., Capt., 5717 Dorchester Ave., Chicago.
Schochet, Sydney S., Capt., 619 Normal Ave., Normal.
Schreiber, Norman J., Capt., 1001 N. 5th Ave., St. Charles.
Schweitzer, Edmund H., Capt., 120 Sherman Ave., Peoria.
Seaton, Ralph M., Capt., Morrisonville.
Seidmon, Edward Edgar P., Major, 5503 Gladys Ave., Chicago.
Seifert, Edward H., Lt. Col., 182 N. Prairie St., Galesburg.
Shaftel, Norman, Capt., 629 Deming Pl., Chicago.
Sharer, Robert F., Lt. Col., 445 N. Lombard, Oak Park.
Shinglman, Willard E., Major, 4930 W. 13th St., Cicero.
Sodaro, Eugene J., Capt., 4233 Gladys Ave., Chicago.
Sofield, Harold A., Col., 620 Keystone Ave., River Forest.
Sonenschein, Benjamin, 1st Lt., Box 426, Chenoa.
Sowden, Paul R., Capt., 1918 Harrison St., Evanston.
Svejda, Arthur J., 1st Lt., 724 S. Kenilworth, Oak Park.
Swantz, Henry E., Lt. Col., 423 Forest Ave., Oak Park.
Tidwell, John W., Capt., 821 S. 14th St., Herrin.
Urban, Steven B., Capt., 5930 Lawrence Ave., Chicago.
Wade, Chester, Capt., 3251 W. 61st Pl., Chicago.
Westen, William C., Capt., 945 N. Elmwood Ave., Oak Park.
White, Harvey, Capt., 5718 S. Drexel Ave., Chicago.
Winograd, Alvin M., Capt., 7424 Chapel Ave., Chicago.
Wiza, Francis L., Capt., 4800 S. Karlov Ave., Chicago.
Woodruff, Lewis W., Major, 953 Western Ave., Joliet.
Zee, Maurice L., Capt., 1412 Chase, Chicago.

### Indiana

Brown, Robert M., Major, 510 Marion Nat. Bank, Marion.
Clowes, George H. A. Jr., 1st Lt., 3744 Spring Rd., Indianapolis.
Dearmin, Robert M., Major, 5147 N. Delaware, Indianapolis.
DeArmond, Albert M., Lt. Col., 723 Hume Mansur Bldg., Indianapolis.
Hostetter, Irwin Stuart, 1st Lt., Ball Memorial Hosp., Muncie.
Ingersoll, Charles F., Lt. Col., 3136 N. Ill. St., Indianapolis.
Kirch, Leo N., Capt., 1319 Leonard St., Indianapolis.
Lawrence, Joseph C., Capt., 421 Lewis Ave., Evansville.
Lidikay, Edward C., Capt., Ladoga.
Milton, Thomas H., Capt., 2 Beech Grove Ave., Batesville.
Mueller, Lawrence W., Major, Fairfield Manor, Ft. Wayne.
Newton, William H., Lt. Col., General Delivery, Hamlet.
Ramsey, Frank B., Lt. Col., 23 E. Ohio St., Indianapolis.
Ratcliff, Frank W., Major, 612 E. 28th St., La Fayette.
Shields, Jack E., Capt., Medora.
Sholty, William M., Capt., 626 Columbia St. La Fayette.
Shuck, William A., Major, 403 W. 2nd St., Madison.

### Indiana—Continued

Stanley, John S., Capt., 3716 Main St., East Chicago.
Stecy, Peter, Capt., 2108 New York Ave., Whiting.
Stephens, Lowell R., Major, Covington.
Stroup, Tyler J., Major, 3323 College Ave., Indianapolis.

### Iowa

Bettler, Philip L., Lt. Col., 1902 S. Palmetto, Sioux City.
Bishop, James F., Major, 1313½ Harrison St., Davenport.
DeYoung, Ward A., Capt., Glenwood.
Ehrenhaft, Johann L., Capt., S. U. T. Hospital, Iowa City.
Evans, William I., Capt., 920 Early St., Sac City.
Goldberg, Louie, Capt., Hotel Ft. Des Moines, Des Moines.
Herrick, Thomas G., Capt., Hubbard.
Lehman, Emery W., Major, 4817 Pleasant St., Des Moines.
Martin, Ronald F., Capt., 112 20th St., Sioux City.
Mattice, Lloyd H., Capt., Danbury.
Ptacek, Joseph L., Capt., 713 Willson St., Webster City.
Saar, Jesse L., Major, Donnellson.
Shaw, Ernest E., Major, 811 N. Buxton St., Indianola.
Stadler, Harold E., Capt., State U. Hosp., Iowa City.

### Kansas

Dunlap, Richard L., Major, 3118 Dorr St., Topeka.
Edwards, Theodore F., Capt., 58th & Mastin Rd., Merriam.
Ford, Frederick L., Capt., 861 Rockledge, Topeka.
Miles, Paul W., Capt. 222 E. 7th St., Newton.
Mollohan, Morgan L., Capt., Arcadia.
Newman, Clifford B., Capt., 617½ N. Broadway St., Pittsburg.
Prochazka, Otto F., Major, 3201 W. Douglas, Wichita.
Taggart, Floyd C., Capt., 1811 Westwood Dr., Topeka.

### Kentucky

Carter, Tim L., Capt., Tomkinsville.
Coleman, Thomas B., Capt., 4919 Southern Parkway, Louisville.
Elliott, Richard G., Lt. Col., 8 Mentelle Park, Lexington.
Fish, Carlos A. Jr., Lt. Col., 1221 Cherokee Road, Louisville.
Lamb, William F., Lt. Col., Russellville.
McAllister, Max F., Lt. Col., U. S. Vet. Hospital, Outwood.
Miller, Oliver P., Lt. Col., Vet. Adm. Fac., Lexington.
Pryor, George E., Jr., Capt., Phoenix Bldg., Hopkinsville.
Reid, Benjamin A., Capt., 3514 W. Broadway, Louisville.
Scott, Frederick, A., Capt., 614 N. Scott St., Madisonville.
Solomon, Edwin P. Jr., Capt., 2312 Alta Avenue, Louisville.
Young, John D., Jr., Capt., 220 Loudon Ave., Lexington.

### Louisiana

Campbell, Guy, Major, PO Box 245, Jena.
Collins, Jason H., Capt., 2105 Gen. Pershing St., New Orleans.
Furbeck, George N., Capt., 7930 Freret St., New Orleans.
Garland, William J., Lt. Col. P.O. Box 36, Logansport.
Karlin, S., Major, 6200 Hurst St., New Orleans.
Kinberger, Frank R., Capt., 547 Esplanade Ave., New Orleans.
Mancuso, Bruno F., Capt., 2109 Alvar, New Orleans.
Mogabgab, A., Col., 2 Versailles Blvd., New Orleans.
Montgomery, James B., Major, 402 Jefferson Blvd., Lafayette.
Prouet, Prudence E., Major, 4902 Franklin Ave., New Orleans.
Richardson, Arthur J., Jr., Capt., Charity Hosp., New Orleans.
Stamm, Joseph, Major, 1403 Delachaise St., New Orleans.
Tatum, Sherard A., Capt., Homer.

### Maine

Bonanno, Anthony M., 1st Lt., PO Box 71, Berwick.
Bourassa, Harvey J., Capt., 13 Benton Ave., Waterville.
Bousquet, Jean J., Capt., 91 Bartlett St., Lewiston.
Burrage, William C., Capt., 53 Chadwick St., Portland.
Clough, Herbert T., Jr., Capt., 209 State St., Bangor.
Geer, George I., Jr., Capt., 61 Hurley St., Portland.
Getchell, Ralph A., Lt. Col., 321 Brackett St., Portland.
Heifetz, Ralph, Major, 61 Exeter St., Portland.
Houlihan, John S., Major, 46 Fern St., Bangor.
Larkin, Donald F., Major, 4 West St., Waterville.
Tounge, Harry G., Capt., 12 Union St., Camden.
Tower, Elmer M., Major, Ogunquit.
Viles, Wallace E., Capt., Turner.
Witte, Max E., Capt., State Hospital, Bangor.

### Maryland

Aubrey, John F., Lt. Col., Temple Court Apts., Baltimore.
Castagna, Joseph V., Lt. Col., 3806 Greenway, Baltimore.
Cooper, Donald D., Major, 101 Burke Ave., Towson.
Fox, Henry M., Lt. Col., 1739 Eutaw Pl., Baltimore.
Frick, John P., Lt. Col., 814 Professional Bldg., Kansas City.
Gay, James R., Major, Johns Hopkins Hospital, Baltimore.
Goodwin, Willard E., Capt., 529 N. Wolfe St., Baltimore.

# PHYSICIANS SEPARATED FROM SERVICE

### Maryland—Continued

Greenwald, Eugene, Capt., Friendsville, (Box 43).
Katzenstein, Lawrence, Major, 2203 Linden Ave., Baltimore.
Kemick, Irvin B., Capt., 3736 Towanda Ave., Baltimore.
Kimberly, Robert C., Lt. Col., Catonsville.
Kleinschmidt, Earl E., Major, 112 Quincy St., Chevy Chase.
Kundahl, Paul C., Capt., P.O. Box 47, Germantown.
Moore, James I., Lt. Col., 206 Park Drive, Catonsville.
Murphy, Franklin D., Capt., 5300 Belleview, Kansas City.
Quill, Thomas H., Capt., 208 Rockwell Terrace, Frederick.
Savage, John E., Major, 311 Thornhill Road, Baltimore.
Thompson, Winfield L., Capt., Kingston.

### Massachusetts

Andaloro, Vincent A., Capt., 613 Broadway, Everett.
Angelo, Peter J., 1st Lt., Norfolk County Hospital, Braintree.
Asselin, Elzear F., Major, 554 Western Ave., Lynn.
Babb, Warren D., Capt., 40 Chestnut, Salem.
Baker, Myles P., Lt. Col., 70 Fairmount St., Brookline.
Bennett, William H. Jr., Major, 31 General Cobb St., Taunton.
Blais, Robert E., Capt., 165 Main St., Amesbury.
Bookstein, Jacob, 1st Lt., 322 Blue Hill Ave., Roxbury.
Brem, Jacob, Lt. Col., 27 Elm St., Worcester.
Coffey, John H., Major, 32 Grove St., Brockton.
Cohen, Benjamin, Major, Grafton State Hospital, North Grafton.
Cohen, Sidney S., Capt., 4 Montvale Rd., Newton.
Denning, Walter S., Capt., 28 Davis Ave., Brookline.
Denny, George P., Col., 274 Beacon St., Boston.
Donovan, John H., Capt., 34 W. Main St., Orange.
Failla, Samuel D., Major, 48 Haywood St., Greenfield.
Fanelli, Raymond J., Capt., 50 Main, W. Springfield.
Freedman, Jacob P., Major, 84 Brunswick St., Boston.
George, Arnold P., Major, 78 Chestnut St., Haverhill.
Grace, Sydney, Capt., 4 Overlook Park, Newton Center.
Green, Milton M., Capt., 63 Armandine St., Dorchester.
Ham, Donald P., Lt. Col., 219 Aspinwall Ave., Brookline.
Hamblett, John B., Major, 495 Varnum Ave., Lowell.
Hamilton, Harold H., Lt. Col., 70 Court St., Plymouth.
Harrington, Philip V., Capt., Southborough.
Hosman, Israel D., Capt., 188 School St., Chicopee.
Houle, Emile A., Capt., 256 Willard St., Dracut.
Kaufmann, Gustav G., Lt. Col., 15 School St., Andover.
Kaufman, Maurice, Capt., 231 Park Dr., Boston.
Kees, Philip A., Capt., 31 Sylvan St., Longmeadow.
LeBaron, Francis E., Major, 27 Leydon St., Plymouth.
Lee, Joshua M., Capt., 1033 Beacon St., Brookline.
Levins, Leo V., Major, 128 Longwood Ave., Brookline.
Ludwig, Alfred O., Major, 86 Juniper Road, Belmont.
Mangione, Bernard J., Major, 740 Bedford St., Fall River.
Mazer, Mendel, Capt., 293 Bridge St., Springfield.
Mellen, Harry J., Capt., 18 Northumberland Rd., Pittsfield.
Milone, Antonio P., Capt., 4354 Washington St., Roslindale.
Moore, Ralph C., Capt., 721 Huntington Ave., Boston.
Morrison, Philip J., Capt., 66 Revere St., Boston.
O'Brien, John F., Major, 77 Payson Road, Chestnut Hill.
Owen, Charles K., 1st Lt., 52 Bartlett Ave., Pittsfield.
Parnes, Jacob, 1st Lt., 7 Main St., Leominster.
Pfeifer, Ladislaw E., Capt., 326 Springfield St., Springfield.
Pier, Arthur S., Jr., Major, 539 Brush Hill Rd., Milton.
Pollock, Henry M. Jr., Capt., 8 Monument Ter., West Medford.
Record, Eugene E., Major, 41 Pilgrim Rd., Boston.
Richmond, Eugene L., Capt., 857 Pleasant St., Worcester.
Rogers, Howard W., Capt., 83 High St., Newburyport.
Scribner, Robert A., Capt., 190 North Ave., Haverhill.
Secunda, Lazarus, Major, 134 Sutherland Rd., Brighton.
Soutter, Lamar, Major, 13 West Cedar St., Boston.
Staples, Clark, Capt., 180 Summer St., Malden.

### Michigan

Bennett, Matthew C., Capt., 174 Fisher Rd., Grosse Pt. Farms.
Beresh, Louis, Capt., 2456 Atkinson, Detroit.
Black, Franklin R., Capt., % Mrs. B. E. Black, 219 Park, Traverse City.
Cook, James C., Major, Harper Hospital, Detroit.
Cross, Kenneth R., Major, Receiving Hospital, Detroit.
DeWitt, Norman L., Capt., 802 Hanselman Bldg., Kalamazoo.
Feldman, Nathaniel L., Major, 2961 Elmhurst Ave., Detroit.
Furlong, Harold A., Col., 207 Navajo Road, Pontiac.
Ginsberg, Harold I., Capt., 1555 W. Davison St., Detroit.
Gitlin, Charles, Capt., 1610 Glendale Ave., Detroit.
Howes, Homer A., Major, E. Quadrangle, Ann Arbor.
Johnson, Ward R., Capt., 733 Prospect St., Flint.
Juliar, Joseph F., Capt., 104 South Ave., Mt. Clemens.
Levine, Edward E., Capt., 540 Maccabee Bldg., Detroit.
Lofstrom, James E., Lt. Col., 1631 Taunton Ave., Birmingham.
Seidel, Karl E., Capt., 256 E. Washington, Ionia.
Smith, Clifton H., Lt. Col., Vet. Adm., Dearborn.
Stone, Ethon L., Capt., 9069 N. Martindale, Detroit.
Tear, Malcolm J., Capt., 18445 Woodingham Drive, Detroit.
Wilson, Charles S., Lt. Col., 2170 E. Jefferson, Detroit.
Witus, Carl, Capt., 18440 Fairfield, Detroit.

### Mississippi

Barkley, Thomas J., Major, Isola.
Coe, James E., Capt., Leland.
Hudson, Lawrence B., Lt. Col., 709 Hall Ave., Hattiesburg.
Hurt, Albert D., Major, 1109 Taylor St., Corinth.
Johnston, Walter E., Major, Vicksburg.
McCalip, Hugh L., Lt. Col., Yazoo City.
Massengill, Robert C., Major, South Church St., Brookhaven.
Terrell, Vernon L., Capt., 612 High School Ave., Columbia.

### Missouri

Brams, Jack B., Capt., 306 E. 12th St., Kansas City.
Campbell, James W., Major, 429 W. 61 Terrace, Kansas City.
Clark, Ray A., Major, 4103 Euclid St., Kansas City.
Curtis, William S., Major, 500 Security Bldg., St. Louis.
Fleming, Royall B., Major, 2548 Paseo, Kansas City.
Graul, Elmer G., Capt., 4141-a Magnolia St., St. Louis.
Hamilton, Eugene H., Major, 200 North 20th, Hannibal.
Mackey, John F., Jr., Capt., 3520 Chippewa, St. Louis.
McNew, William T., Capt., 1204 S. Main St., Carthage.
Neubauer, D. W., Capt., 16 Hanley Downs, Richmond Heights.
Schmiemeier, Roy H., Capt., 6217 Delor St., St. Louis.
Schulte, Gregory A., Lt. Col., 2016 Pennsylvania Ave., Joplin.
Silsby, Harry D., Major, 2018 S. Hampton St., Springfield.
Smith, Louis J., Capt., Main & Mill St., New Madrid.
Sullivan, Clement J., Major, 5904 Enright, St. Louis.
Sutton, Richard L. Jr., Major, 31 E. 62 St., Kansas City.
Tenaglia, Eutimio D., Major, Route 2, Box 562, Clayton.
Thurston, Donald L. E., Capt., 4 Oakleigh Lane, Clayton.
Tracy, Herbert A., Capt., 434 N. Pine St., Perryville.
Wakeman, Jasper N., Capt., 1102 Meadowmere, Springfield.

### Montana

Borkon, Maurice, Capt., 834 2nd Ave., W., Kalispell.
Bush, Thaddeus F., Major, Va. Apts., Wash St., Butte.
Holcomb, Mark D., Major, 525 Third St., Whitefish.
Moffitt, George J., Capt., PO Box 14, Livingston.
Murphy, Edward S., Col., 308 Eddy Ave., Missoula.
Murphy, James E., Major, West 3d St., Whitefish.
O'Keefe, Neil J., Capt., 220 W. Porphyry St., Butte.
Pemberton, Charles W., Major, Murray Clinic, Butte.

### Nebraska

Buhl, Clayton E., Major, Mullen.
DeLong, Henry L., Capt., 4801 Chicago St., Omaha.
Formanack, Carl J., Capt., Murdock.
Kennedy, James F., Capt., Box 804, Butte Ave., Alliance.
Krieg, Jacob, Jr., Major, Univ. Hosp., 42d & Dewey, Omaha.
Loudon, John R., Major, 1715 S. 22d St., Lincoln.
McCleery, Daniel P., Major, 112½ S. 6th St., Beatrice.
McNeil, John S., Capt., St. Elizabeth Hospital, Lincoln.
Merselis, Harold K., Capt., North Bend.
Nemec, Edward C., Lt. Col., 4565 Shirley St., Omaha.
Owen, Donald R., Capt., 211 Emmett, Omaha.
Read, Paul S., Major, 7009 Minne Lusa Blvd., Omaha.
Winter, Robert C., Major, Western.

### New Hampshire

Barton, Donald G., Major, Concord.
Daniels, Philip B., Major, 67 Summer St., Keene.
Flanagan, Donald J., Major, 107 Green St., Somersworth.
Fortier, Norman L., Capt., 55 Mt. Forist St., Berlin.
Moors, Charles E., Jr., Capt., 16 Wakefield St., Rochester.
Tracy, Ellsworth M., Capt., 1 South St., Concord.

### New Jersey

Andricks, Eugene A., Major, 99 Sheridan Ave., Hohokus.
Baer, Irving, Capt., 801 Boulevard Ave., Bayonne.
Baldwin, William H., Capt., 152 Penna. Ave., Paterson.
Balsamo, Joseph J., Capt., 224 S. 8th St., Newark.
Bresev, Morris, Capt., 36 Stegman St., Jersey City.
Brotman, Harry A., Capt., 808 S. 11th St., Newark.
Brown, John L., Capt., 1019 Cumbermede Road, Palisade.
Burnett, Lawrence F., Capt., 386 Roseville Ave., Newark.
Carusi, Leonard G., Capt., 337 Park Ave., Paterson.
Clark, John C., Major, 501 Grand Ave., Asbury Park.
Cope, James C., Capt., 20 Cornell Road, Glassboro.

# PHYSICIANS SEPARATED FROM SERVICE

### New Jersey—Continued

Danzis, Louis, Major, 94 Lyons Ave., Newark.
David, Leopold S., Capt., 1404 Baird Ave., Camden.
Defelice, Mario T., Capt., 28 Mount Airy Rd., Bernardsville.
Doktor, David, Capt., 288 Hamilton Ave., Paterson.
Ebner, Paul G., Capt., 408 Overhill Rd., Haddonfield.
Egel, Norman, Maior, 917 Steele Ave., Plainfield.
Fath, Marcus A., Capt., 200 W. Poplar Ave., Wildwood.
Featherston, Daniel F., Lt. Col., 506 4th Ave., Asbury Park.
Germain, Raymond J., Capt., Main St., High Bridge.
Gordon, Samuel, Capt., 540 Park Ave., Paterson.
Gottlieb, Morris, Major, 9 S. Swarthmore Ave., Ventnor City.
Hummel, Frederick W., Capt., 916 4th Ave., West Belmar.
Joffe, Philip M., Capt., 415 18th Ave., Paterson.
Keitlen, Philip B., Capt., 3 Paulmier Place, Jersey City.
Lakiszak, R. T., Capt., 175 Jackson Ave., Jersey City.
Loeser, Lewis H., Lt. Col., 27 Glenside Road, South Orange.
Loksa, Harold T., Capt., 520 Washington St., Boonton.
McCarthy, William P., Capt., 1203 Parkside Ave., Trenton.
Mackowsky, Edwin, Capt., 241 2d St., Jersey City.
Marcus, Donald, Capt., 640 Stuyvesant Avenue, Irvington.
Megibow, Raymond S., Capt., 6051 Boulevard East, West New York.
Moore, James A., Major., 99 S. Mountain Ave., Montclair.
Palmeri, Anthony F., Capt., 44 Palmer St., Passaic.
Paul, Abraham, Capt., 1001 Arctic Ave., Atlantic City.
Pearl, Sidney S., Capt., 545 Rahway Avenue, Elizabeth.
Pennoyer, James, Major, 515 Bloomfield Ave., Montclair.
Richlin, Padie, Major, 316 George St., New Brunswick.
Ringe, Charles L., Jr., Capt., 412 Winthrop Road, Teaneck. (Mailing address: Meadowbrook, N. Y.)
Rocco, Leo C., Major, 75 Maple Avenue, Red Bank.
Ruccia, Arthur J., 1st Lt., 93 Mt. Prospect Ave., Newark.
Sax, Charles E., Major, St. Joseph Hosp., Paterson.
Scanlan, David B., 1st Lt., 155 S. Ill. Ave., Atlantic City.
Seidman, Joshua I., Capt., 16 Seymour Ave., Newark.
Sewall, Arthur D., Major, 195 E. Commerce St., Bridgeton.
Spinnler, Henry R., 1st Lt., 93 Lee Ave., Haledon.
Stetser, Leland M., Capt., 920 Haddon Ave., Collingswood.
Vann, Felix H., Capt., 63 Spring Lane, Englewood.
Wright, Herman W., Capt., 818 S. Broadway, Pitman.
Zuckerberg, I., Capt., 31 E. 32nd St., Bayonne.

### New Mexico

Edahl, Edwin W., Capt., 138 W. Manhattan Ave., Santa Fe.
Gonzalez, Saturnino M., Major, Laughlin Bldg., Santa Fe.
Pond, Ashley, Capt., Taos.

### New York

Alessi, Alfred Charles, Capt., 1222 Pine Ave., Niagara Falls.
Allen, Arthur C., Major, 303 E. 20th St., New York.
Allen, Benjamin I., Capt., 721 Walton Ave., New York.
Allentuck, Samuel, Major, 1840 Grand Concourse, Bronx.
Allison, William E., Major, 24 Mexico St., Camden.
Alterbaum, George, Capt., 2470 E. 21st St., Brooklyn.
Altschuler, Stanley, Capt., 1381 53d St., Brooklyn.
Amorosi, Edward J., Capt., 34-14 Ninth St., Long Island City.
Anderson, Albert V., Capt., 1005 St. Nicholas Ave., New York.
Annunziato, Augustine J., Capt., 280 E. 162 St., New York.
Appel, Jesse, Capt., 40 Louisa St., Brookiyn.
Babcock, James W., Col., 20 E. 53d St., New York.
Baenn, Arthur H., Capt., 253 Cumberland St., Brooklyn.
Barber, Charles R., Lt. Col., Box 232, Comstock.
Barrett, George S., Capt., 214 Glen Ave., Scotia.
Beil, Arthur R., Major, 550 3d St., Brooklyn.
Bein, Solomon S., Major, 1690 E. Seventh St., Brooklyn.
Bellafiore, Vincent, Capt., 97-33 75th St., Ozone Park.
Bergen, Harold G., Capt., 34 Gold St., Norwich.
Berglas, Jacob B., Capt., 1991 E. 4th St., Brooklyn.
Berk, Charles, Capt., 350 Lefferts Ave., Brooklyn.
Berkowitz, Maxwell, Lt. Col., 696 Eastern Pkwy, Brooklyn.
Berkowitz, Samuel, Capt., 665 Ocean Pkwy, Brooklyn.
Berliant, Meyer H., Capt., 1956 Crotona Parkway, Bronx.
Bernstein, Harold, Capt., 140-11 Ash Ave., Flushing.
Bernstein, Isidor, Capt., 2013 77th St., Brooklyn.
Bernstein, Samuel, Capt., 1660 Topping Ave., New York.
Bliss, Robert C., Capt., 908 Warren St., Hudson.
Blumberg, Allan E., Major, 214 W. 72d St., New York.
Blumberg, Ralph, Capt., 3622 Avenue M, Brooklyn.
Bomse, Emanuel M., Capt., 1245 50th St., Brooklyn.
Borkow, Philip S., Major, 755 Ocean Ave., Brooklyn.
Borzilleri, James R., Capt., 9 Colonial Circle, Buffalo.
Bottino, Clement G., Capt., 540 E. 187 St., Bronx.
Bowden, Lemuel, Capt., 444 E. 68th St., New York.

### New York—Continued

Boynton, Perry S., Jr., Capt., 136 E. 67th St., New York.
Bradner, Morris R., Col., 22 Maple Ave., Warwick.
Brickner, Merol E., Capt., 161 First Ave., Gloversville.
Bridgham, Samuel W., Capt., 152 E. 94th St., New York.
Brimson, James A., Capt., New City Hosp., New York.
Brindisi, Arturo A., Capt., 289 Webster Ave., New Rochelle.
Brown, Henry, Capt., 823 E. 147th St., New York.
Brown, Robert E., Major, 330 S. Tenth, Mt. Vernon.
Browne, William F. Jr., Capt., 133 Bushwick Ave., Brooklyn.
Brumberger, Gustave N., Capt., 116-05 230 St., St. Albans.
Bursen, Earl P., Capt., 53 E. 55th St., Brooklyn.
Bush, Hubert S., Major, 151 Onslow Place, Kew Gardens.
Button, William H. Jr., Major, 151 E. 80th St., New York.
Charet, Richard, Major, 950 50th St., Brooklyn.
Chiarello, Augustus V., Capt., 343 76th St., Brooklyn.
Childress, Harold M., Major, 15 E. 4th St., Jamestown.
Cogen, Murray, Capt., 36 Ludlow St., New York.
Cohn, Hans J., Capt., Woodstock.
Cohn, Mortimer M., Major, 2868 W. 31st St., Brooklyn.
Colton, Benjamin, Capt., 33-20 150th St., Flushing, L. I.
Colvin, William P., Capt., 147 5th Ave., New Rochelle.
Connolly, Harold X., Capt., 320 E. 201 St., New York.
Connor, John E., 1st Lt., 325 Glenwood Ave., Rochester.
Constad, Arnold N., Capt., 201 Linden Blvd., Brooklyn.
Constantine, Frank H., Major, Manhattan Eye & Ear Hospital, New York.
Cunningnam, John E., Capt., 44 Elm St., Warrensburg.
Curtis, Dean, Lt. Col., 140 E. 54th St., New York.
Dalmain, Walter A., Capt., 194 Bedford Road, Pleasantville.
Danciger, Jacob A., Major, 12 E. 97th St., New York.
Daniel, Walter A., Capt., Kings County Hospital, Brooklyn.
Davidson, Arnold, Capt., 2045 Gleason Ave., Bronx.
DeNicola, Vincent J., Major, 35-21 86th St., Jackson Heights.
Deutsch, Theodore M., Capt., 1416 Avenue I, Brooklyn.
Diamond, Irving, Capt., 2108 Harrison Ave., Bronx.
DiFabio, Francis X., Capt., 34-18 29th St., Long Island City.
Donaldson, Kenneth T., Capt., 729 Seventh Ave., New York.
Donato, Marion T., Major, 331 Foote Ave., Jamestown.
Drexler, Bernard, Capt., 27 Harlem St., Rochester.
Duhan, Eliot, Capt., 120-11 103d Ave., Richmond Hill.
Eggers, H., Major, 4338 Vireo Ave., New York.
Ehrlich, Joseph C., Capt., 275 W. 11th St., New York.
Eisen, Milton J., Lt. Col., 70 Park Terrace West, New York.
Eisler, Herbert, Capt., 267 E. 7th St., New York.
Elder, Maurice James, Capt., 30 Whitney St., Massena.
Enzien, Ernest, Capt., 28 Francis St., Mechanicville.
Etkin, Sidney I., Capt., 199 Seeley St., Brooklyn.
Fazio, Michael G., Capt., 1426 69th St., Brooklyn.
Feder, Isidore A., Lt. Col., 1317 E. 23rd St., Brooklyn.
Feely, Edward J., Capt., 300 11th St., Brooklyn.
Feit, Emanuel, Capt., 2092 Davidson Ave., New York.
Feldman, Max, Capt., 540 Rockaway Pkwy., Brooklyn.
Fink, Frank E., Capt., 161 W. 75th St., New York.
Fleck, Henry, Capt., 1206 Washington Ave., New York.
Fliegelman, Charles H., Capt., 2078 Creston Ave., New York.
Ford, William G., Major, 159 Heath St., Buffalo.
Fosco, William N., Capt., 2501 Laconia Ave., Bronx.
Franks, Andrew G., Major, 313 E. 17th St., New York.
Fratkin, Max, Capt., 446 Kingston Ave., Brooklyn.
Freed, Leon C., Major, Greenwood Lake.
Geib, Fred W., Major, 1100 Park Ave., Rochester.
Geiger, Herwald B., Maj., 34-15 94th St., Jackson Heights, L. I.
Geller, Hyman, Capt., % Max Jaffe, 51 Bell St., Hempstead.
Gersten, David, Capt., 510 E. 6th St., New York.
Gikow, Herman, Capt., % Kronick, 917 Sheridan Ave., N. Y. C.
Glassman, Herman, Capt., 2114 Albermarle Rd., Brooklyn.
Godfrey, Joseph D., Major, 175 Cazenovia St., Buffalo.
Goldsmith, Morris, Capt., 231 Amboy St., Brooklyn.
Goldstein, Abe S., Major, 554 Schenck Ave., Brooklyn.
Goldstein, Philip, Col., 8651 21st Ave., Brooklyn.
Gordon, Hirsch L., Capt., 605 Beech Terrace, Bronx.
Greenburg, Avrom M., Major, Whitesville.
Greenlee, Ralph M., Capt., St Lukes Hosp., New York.
Griffin, Ernest P. Jr., Major, Grasslands Hospital, Valhalla.
Griffin, William R., Capt., 150 Moffat St., Brooklyn.
Grilihas, Morris, Capt., 2136 71 St., Brooklyn.
Grosof, William S., Capt., 542 Pennsylvania Ave., Brooklyn.
Guardino, Louis J., Capt., 103-19 Van Wyck Blvd., Jamaica.
Halberstam, Charles A., Major, 1749 Grand Concourse, Bronx.
Hellman, Jack M., Capt., 803 State St., Watertown.
Henschel, Mervin A., Capt., % Miss Rosalyn Katzen, 130 E. 39th St., New York.
Herkus, David T., Capt., 25-95 41st St., Long Island.

# PHYSICIANS SEPARATED FROM SERVICE

## New York—Continued

Hofmann, Herman G., Capt., 15 Lawn Ave., New Rochelle.
Hott, Louis R., Major, 2901 Ocean Parkway, Brooklyn.
Huntington, Charles G., Capt., 115 Battle Ave., White Plains.
Hurtes, Harold C., Capt., 714 Howard Ave., Brooklyn.
Hurwitz, Paul, Capt., 2710 Morris Ave., Bronx.
Hyman, Aaron, Capt., 2000 McGraw Ave., Bronx.
Ingalls, Stanley S., Capt., 362 S. Fourth St., Fulton.
Ittner, William F., Capt., 2 Miller Ave., Brooklyn.
Iuppa, Nicholas V., Capt., 2725 Dewey Ave., Rochester.
Ivins, John C., Lt. Col., Bellevue Hosp., New York.
Jackson, Charles G., Capt., 1470 Midland Ave., Bronxville.
Jacobson, Milton B., Capt., 34-17 30th St., Long Island City.
Jacoby, Jacob, Capt., 1925 Quentin Road, Brooklyn.
Kahn, Bernard S., Major, 190 Riverside Drive, New York.
Kahn, Ephraim, Capt., 455 Jackson Ave., Bronx.
Kaiser, Robert A., Capt., 64 Broadway, Buffalo.
Kaplan, Eugene, 1st Lt., 115-30 Park Lane, Kew Gardens.
Karp, Frank L., Capt., President Hotel, Long Beach, L. I.
Kasich, Milosh, Lt. Col., 440 W. 34th St., New York.
Kerr, Robert H., Major, 84 N. Main St., Cortland.
Kinbaum, Alexander L., Capt., 117 Wecker Ave., Buffalo.
Kingston, David T., Capt., Moira.
Kiss, Stephen, Major, 7820 95th Ave., Woodhaven.
Klaer, Harvey, Jr., Capt., 289 Front St., Omego.
Klein, Sam J., Capt., 1692 Union St., Brooklyn.
Kline, Ernest H., Lt. Col., 63 North Broadway, Nyack.
Kopetzky, Samuel J., Col., 71 E. 80th St., New York.
Kove, Simon, Major, 272 E. 45th St., Brooklyn.
Kraus, Daniel M., Capt., 2685 University Ave., New York.
Krebs, Irving B., Capt., 14 Third St., Great Neck.
Krieger, Jerome L., Capt., 683 41st St., Brooklyn.
Krimsky, Emanuel, Major, 745 Eastern Pkwy., Brooklyn.
Kurz, E. R. H., Major, 88-48 Union Turnpike, Glendale, L. I.
Kwak, Albin V., Capt., 485 Terrace Blvd., Depew.
Laporte, George L. Jr., Lt. Col., 315 E. 88th St., New York.
Latcher, John W., Major, 44 Center St., Oneonta.
Lazar, Alfred E., Capt., 287 E. 167th St, New York
Lechner, Sidney, Capt., 1662 Townsend Ave., Bronx.
Lefkowitz, Michael P., Capt., 1275 E. 24th St., Brooklyn.
Leigh, O. C., Jr., Major, % Dept. Phys., 630 W. 168th St. N. Y.
Lenobel, Milton I., Capt., 614 Montgomery St., Brooklyn.
Levenstein, Louis S. Major, 150 E. 182d St., Bronx.
Lever, Shelby N., Major, 774 Hancock St., Brooklyn.
Little, David L., Capt., 295 Glen St., Glens Falls.
Loewinthan, Lawrence, Capt., 145 Seaman Ave., New York.
Lombardo, Thomas A., Capt., 792 West Ave., Buffalo.
McGuinness, Edward J. Jr., Capt., 118 Sterling Place, Brooklyn.
McKelvey, Augustus J., Lt. Col., 12 N. Drive St., Malba, L. I.
Maggiore, Michael J., Capt., 104 W. Valley St., Endicott.
Maguire, William C., 1st Lt., 133 Delaware Ave., Albany.
Mandel, Howard St., 1st Lt., BX 163, Mahopac.
Maranov, Solomon, Capt., 1450 51st St., Brooklyn.
Marck, Abraham 1st Lt., 623 W. 136th St., New York.
Marcus, Julius, 1st Lt., 246 W. End Ave., New York.
Marks, David N., Major, 21 W. 86 St., New York.
Marks, Irving E., Capt., 20 W. 84th St., New York.
Martin, Herbert, Capt., 2602 Avenue T, Brooklyn.
Martinson, Edgar O., Capt., 632 Third St., Brooklyn.
Mascali, Angelo A., Capt., Harlem Valley Sta. Hos., Wingdale.
Maurer, Murray L., Lt. Col., 209-27 112 Rd. St., St. Albans.
Meinrath, Hans, Capt., 75-40 Austin St., Forest Hills.
Mendelsberg, Simon B., Capt., 1755 E. 13th St., Brooklyn.
Merriam, George R., Capt., 92 Haven Ave., New York.
Merrim, Bentley D., Capt., 667 E. 34th St., Brooklyn.
Meyers, Hubbard K., Major, 685 Parkside Ave., Buffalo.
Michaels, Leo, Capt., 1326 Grand Concourse, Bronx.
Milazzo, Richard T., Capt., 786 Plymouth Ave., S. Rochester.
Miller, Bertram W., Capt., 2701 Grand Concourse, Bronx.
Milne, Robert E. A., Major, 23 Wolcott St., Leroy.
Mintzer, Alex, Capt., 287 Sullivan Pl., Brooklyn.
Mistretta, Ignatius E., Capt., 47 Hempstead Ave., Rockville Centre.
Montgomery, Warren R., Jr., Capt., 171 Park St., Buffalo.
Moore, Walter Van O., Col. 1 Nevins St., Brooklyn.
Morchan, Samuel, Capt., 41 Main St., Angelica.
Morgenstern, D. M., Capt., 105-56 V. Wyck Blvd., Richm'd Hill.
Morris, Philip, Capt., 218 E. 94th St., Brooklyn.
Mosher, John F., Lt. Col., Civill Ave., Coeymans.
Murphy, John R., Capt., 75 Main St., Saranac Lake.
Murray, Wm. J., Major, Binghamton State Hosp., Binghamton.
Nelson, Lloyd J., Capt., Creedmoor State Hospital, Queens Village.
Newman, Allen P., Capt., 218 E. 165th St., New York.
Noonan, Francis M., Capt., 136 Simmons Ave., Cohoes.

## New York—Continued

Noonan, Thomas R., Major, 10 Terrace Park, Rochester.
O'Brien, John J., Major, 210 Robinson St., Binghamton.
O'Connor, John D., Major, 724 Ridge Rd., Lackawanna.
Odenwald, Robert P., Capt., 53 Park Pl., Suffern.
Olson, Albert W., Major, 419 Clinton Ave., Brooklyn.
Olson, Robert A., Major, East Main St., Brocton.
Orans, Alfred A., Capt., 100 Winthrop St., Brooklyn.
Palank, Edward A., 1st Lt., 225 Lenox Ave., Hempstead.
Paley, Samuel M., Major, 154 W. 70th St., New York.
Pappalardi, Felix A., Capt., 276 E. 199th St., Bronx.
Patane, Joseph M., Major, 1371 Hancock St., Brooklyn.
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Perry, Thomas L., Jr., Capt., 310 E. 55th St., New York.
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Press, Harold A., Capt., 68-37 108th St., Forest Hills.
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Riley, Edward C., Capt., 52 Sylvan Ave., Tuckahoe.
Riley, Warren S., Major, 209 William St., Watertown.
Ripps, Isador, Capt., 230 E. 167th St., Bronx.
Robinson, Irving W., Capt., 63 S. Lake Drive, Lakewood.
Roper, Leon F., Capt., Main St., Scio.
Rosenberg, Abraham, Capt., 3351 Seymour Ave., Bronx.
Rosenberg, Beryl D., Capt., 875 Park Place, Brooklyn.
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Schwartz, Samuel, Major, 2018 Avenue J. Brooklyn.
Schwartz, Sidney A., Capt., 740 Empire Blvd., Brooklyn.
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Shapiro, Lester E., Capt., 1625 51st St., Brooklyn.
Shapiro, Sidney J., Capt., 2525 Aqueduct Ave., Bronx.
Silber, Maurycy, Capt., 1716 Avenue T, Brooklyn.
Silson, John E., Capt., 234 E. 96th St., New York.
Silverman, F. N., Capt., Babies Hosp., 167th-Brdwy, N. York.
Singer, Solomon B., Capt., 180 E. 163d St., Bronx.
Slattery, Louis R., Lt. Col., 123 E. 61st St., New York.
Sonneborn, Walter M., Capt., 234 Martine Ave., White Plains.
Soscia, Anthony M., Capt., 705 E. 187th St., Bronx.
Spector, Louis H., Capt., 1139 St. Paul St., Rochester.
Stanton, Edward F., Capt., 17 E. 96 St., New York.
Stark, Charles W., Major, 50-10 195 St., Flushing.
Stark, William, Capt., 177-20 Leslie Road, Springfield Gardens.
Starr, Eli, Capt., 98 Heyward St., Brooklyn.
Stauffer, John H., Capt., 8 Chapel St., Canton.
Stein, Samuel J., Capt., 530 E. 139 St., New York.
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Thompson, Maurice B., Capt., 5 Highland Ave., Great Neck.
Toms, Roland E., Lt Col., Vet. Adm., Northport.
Tontar, Silvio, Capt., 1 Grace Church St., Port Chester.
Torrance, Adam M., Capt., Harpursville.
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Urbont, Alex. R., Capt., 783 Beck St., New York.
Van Der Linde, John M., Capt., 101 Lafayette Ave., Brooklyn.
Van Ess, Jerome R., Capt., 152 W. 58th St., New York.
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## North Carolina

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Fuller, Henry F., Capt., Kinston.
Greene, James V., Capt., Box 447, 435 Hay St., Fayetteville.
Hairfield, Beverly D., 1st Lt., Morganton.
Lapsley, Alberti F., Capt., Badin.
Long, Thomas W., 1st Lt., Newton.
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Wyatt, Arthur T., Lt. Col., Lillington.

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Goldsberry, James E., Capt., % Mrs. Carl Moen, Sentinel Butte.
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## Ohio

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## Oregon

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## Pennsylvania

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Delehanty, John T., Capt., Lattimer.
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Piper, William S., Capt., 110 North Second St., Clearfield.
Reiss, Emil E., Jr., Capt., 412 Carl St., Pittsburgh.
Rhoads, Samuel C., Capt., 738 E. Phil-Ellena St., Philadelphia.
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Ronan, Joseph A., Capt., Altoona.
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### Texas

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Butera, James M., Capt., 1903 W. Walker St., Houston.
Buzbee, Herman R., Capt., Parkland Hospital, Dallas.
Cantrell, William H., Capt., 114½ N. Main St., Van Alstyne.
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McRee, Walter E., Major, Port Arthur.
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# ORGANIZATION SECTION

## Washington Letter

*(From a Special Correspondent)*

Feb. 25, 1946.

### Contract Hospitalization for Veterans Criticized by Legion

The Veterans Administration's contract hospitalization program is under fire from the American Legion. Commander John Stelle, who is reported to be coming to Washington to "bury the hatchet" in his squabble with Veterans Administrator Omar Bradley, has called for facts and figures from every state on contract hospitalization. Veterans claim it was not satisfactory after the last war, and Mr. Stelle says it will "be pretty tough on these new veterans." The veterans agency, in what is planned as a nationwide project, has already arranged with four state hospital associations to contract with private institutions to furnish beds for veterans with service connected ailments. The Legion chief plans to present information to General Bradley and the veterans' medical director, Major Gen. Paul R. Hawley. General Bradley says his agency has already asked for seventeen surplus army and navy hospitals, but the Legion feels that more should be used for veterans. General Hawley contends that only where there are plenty of good doctors available will hospitals be taken over. "It is the worst kind of fraud to offer the veteran a hospital in which it is impossible to give him first class medical care." General Bradley reports a reluctance by employers to hire disabled veterans.

### Wallace Starts Controversy in Des Moines Speech

The charge by Commerce Secretary Wallace in his recent Des Moines speech that western pigs are better nourished than Washington, D. C., school children stirred up a lively controversy. Mr. Wallace claimed that he usually saw ill fed, undernourished children on his home to office walks each day. Dr. Thorval L. Hickman, Gallinger Hospital pediatrician, called the secretary's remarks "exaggerated" and pointed out that standards for determining proper nourishment vary. Dr. Roland B. Scott, pediatrics chief at Freedman's Hospital, reported that 95 per cent of the children brought to that hospital suffered from malnutrition.

### Women to Get Role in Postwar Army

The War Department will seek early legislation establishing the Army Nurse Corps, the proposed Women's Medical Specialist Corps and the Women's Army Corps in the postwar military establishment, according to Major Gen. Willard S. Paul, assistant chief of staff. He addressed a conference of delegates of leading women's groups at the Pentagon Building. General Paul said that as the bill is now being drawn the Army Nurse Corps will be made a permanent corps in the Regular Army and it will give reserve status on request to nurses who served honorably during World War II. The legislation would also include a Women's Medical Specialist Corps consisting of women in the present Dietitians and Physical Therapists Corps. Reserve status will also be sought for discharged Wacs and would include the wartime corps in the permanent army.

### School Lunch Program Bill Approved by House

The House of Representatives has passed by a 275 to 101 vote, and sent to the Senate, the bill authorizing the federal government to spend $50,000,000 on state school lunch programs. Also passed was an amendment by Representative Powell, Democrat of New York, prohibiting funds to states or schools in which students are discriminated against because of race or color.

### Capital News in Brief

Brig. Gen. George R. Callender, U. S. Army, assistant commandant of the Medical Department Professional Service Schools, presented awards to civilian employees of the Army Medical Service who were honored for meritorious service. Temporary relaxation of Washington zoning regulations has been asked to permit doctors unable to get office space to use their living quarters for offices.

Congress has been urged to bypass the controversy between public and private housing on how to clear Washington, D. C., slums and to approve a $20,000,000 Redevelopment Agency in Washington.

Open hearings on legislation to ban experimentation on dogs in the District of Columbia have been set for 10 a. m. Thursday, February 28.

The District of Columbia Medical Society, which took an important part through its delegates in working out the American Medical Association health insurance program, will launch the program here shortly, it is reported.

Group Health, Inc., medical cooperative of government workers, voted at its annual meeting here to extend its medical service "without racial discrimination."

Persons who paid large medical and dental bills in 1945 are advised to make their 1945 income tax returns on the long form 1040 to save money.

## Official Notes

### TEMPORARY APPROVAL OF RESIDENCIES

Because of the large number of applications for approval of residency training programs submitted by hospitals developing these programs in response to the increased demand for training by returning medical officers, the Council on Medical Education and Hospitals of the American Medical Association has approved a plan for the temporary approval of residencies. This plan was developed in collaboration with the Advisory Board for Medical Specialties through its executive committee. A majority of the American boards in the specialties has already indicated an approval of the proposal. It is anticipated that other boards, if not all of them, will subscribe to the plan. The program is as follows:

1. The Council on Medical Education and Hospitals of the American Medical Association has temporarily delegated to its secretary the authority to grant temporary residency approval on behalf of the Council subject to concurrence by the appropriate American board as described in No. 2.

2. Each participating American board has appointed representatives (usually one individual for each board) to consider new residencies for temporary approval with authority to act on behalf of the board.

3. Temporary approval will be based on information from the hospital concerning the personnel, facilities and educational program of the hospital service involved without immediate inspection. Such approval will be granted only if the representatives of the Council and of the board are reasonably satisfied that the educational program fulfils the standards of both bodies.

4. Subsequently, employing the usual procedures, an inspection of the hospital will be carried out by the Council's staff. On the basis of inspection report, the Council will consider the temporarily approved hospital for transfer to the regularly approved list in the usual manner. The inspection report and the recommendations of the Council will be submitted to the appropriate board, and the board will return its concurrence or disagreement with the Council. The result of this procedure would be either (*a*) transfer of the temporarily approved residency to a fully approved status or (*b*) withdrawal of the temporary approval.

5. In the event of withdrawal of temporary approval and failure to grant regular approval, credit toward board certification will be given to physicians for that part of their training received while the residency was on a temporary approval status. After such withdrawal of approval, residents seeking board certification will be given a reasonable time to obtain another acceptable residency without loss of time credit. This means that no resident would be penalized so far as board credit is concerned for time spent in a temporarily approved residency.

In seeking approval by the Council on Medical Education and Hospitals, those hospitals which organize new residencies should initially make no distinction between regular versus temporary approval. Applications should be transmitted to the Council in the regular manner. In the immediate future most, if not all, applications will be considered at once for temporary approval. The Council's staff will proceed with regular inspections as rapidly as possible so that transfer of acceptable hospital residencies from the temporarily approved to the regular approved list will take place as rapidly as possible if the inspection report seems to warrant such transfer in the opinion of the representatives of the Council and of the American board concerned.

### DOCTORS AT HOME BROADCASTS

The American Medical Association in cooperation with the National Broadcasting Company broadcasts each Saturday afternoon at 4 o'clock eastern standard time (3 p. m. central standard time, 2 p. m. mountain standard time, 1 p. m. Pacific standard time) under the title "Doctors at Home." This is the sixth season of broadcasting in dramatized form under the general title "Doctors at Work." The broadcasts present a serial story of the experiences of a fictitious doctor just returned from service as a medical officer of the United States Army.

The next three programs are as follows:

March 2. Surgery Saves Blue Babies; the story of arterial surgery.
March 9. The Tale of a Gland; about toxic goiter.
March 16. Dogs, Cats and Squirrels; the story of rabies.

The programs are summarized by Drs. W. W. Bauer and William W. Bolton of the Bureau of Health Education.

Announcement folders have been prepared for distribution locally. These may be had in quantities of 100 by applying to the Bureau of Health Education. Local distribution can be made effectively by the Woman's Auxiliary groups.

## Council on Medical Service and Public Relations

### REGIONAL CONFERENCE OF REPRESENTATIVES OF MIDDLE ATLANTIC STATES

At the request of the Council on Medical Service and Public Relations of the American Medical Association a regional conference of the representatives of the Middle Atlantic states, including New York, New Jersey, Delaware, Pennsylvania, District of Columbia, Virginia and Maryland, was held at Philadelphia on Thursday, January 31. More than fifty representatives attended.

The conference took the form of an all day round table discussion highlighted particularly by steps toward the formation of a permanent regional organization. It was stressed that this organization should function in a two way manner in order to bring to this area both the desires and information from the national council and convey more in detail the problems and progress made in the several states included in the conference. The following committee was appointed to effect this organization: Dr. F. F. Borzell, Pennsylvania, chairman; Dr. J. M. Emmett, Virginia; Dr. F. J. Quigley, New Jersey; Dr. H. H. Bauckus, New York, and Dr. L. R. Wharton, Maryland; representatives from the District of Columbia and from the Delaware State Medical Society are to be named later.

The conference discussed in detail plans already in operation covering both prepaid medical care to all groups and the cooperation of the several states in the reorganized Veterans Administration program. The latter subject was presented effectively by Col. J. C. Harding, acting director, outpatient service, Veterans Administration, officially representing General Hawley, medical director. From each state represented a frank, factual report was given on the status of medical care problems in that state.

It was obvious that the greatest need at the present time is more effective participation of the county medical societies. Public relations activities were stressed, and here again the necessity for stimulation of local public relations activities through county medical societies is imperative. Said Dr. Borzell, the chairman, "While this was the first conference in this area, it was quite obvious that, as indicated by the active participation of those present, regional conferences have a place in carrying forward both the defensive fight against federal control of medicine as well as the positive constructive program of meeting obvious medical care needs." Another conference of this region will be held early in May.

Those who took part in the program were Dr. F. F. Borzell, chairman, Council on Medical Service and Public Relations, Medical Society of the State of Pennsylvania; Dr. William L. Estes Jr., president, Medical Society of the State of Pennsylvania; Mr. Jay Ketchum, executive vice president, Michigan Medical Service Association, and chairman of the Advisory Committee on Prepayment Medical Care of the Council on Medical Service and Public Relations; Mr. Thomas A. Hendricks, secretary, Council on Medical Service and Public Relations; Col. J. C. Harding, M. C., acting director, outpatient service; Dr. Norman M. Scott, medical director, Medical Service Administration of New Jersey, and executive assistant, Medical Society of New Jersey; Dr. Walter F. Donaldson, secretary-treasurer of the Medical Society of the State of Pennsylvania; Mr. Roy Jansen, publicity representative, Medical Society of the State of Pennsylvania; Mr. James E. Bryan, executive secretary, New York County Medical Society; Mr. Theodore Wiprud, executive secretary, Medical Society of the District of Columbia, and Dr. Joseph S. Lawrence, director of the Washington Office of the Council on Medical Service and Public Relations.

### ATTITUDE OF CHICAGO WOMEN TOWARD MEDICINE

Chicago women are not in favor of socialized medicine, a survey conducted January 28 in the city's Loop area by the Chicago *Tribune* indicated. Of the first fifty women interviewed at the corner of State and Washington streets by *Tribune* writer Norma Lee Browning, only one said that she was willing to relinquish her freedom of choice of a physician or that she wanted free hospitalization and medical care at the expense of an increase in taxes. That one was a native-born German.

The survey was prompted by a doctor's statement that women in general are more doctor conscious than men and should be concerned over what the Wagner-Murray-Dingell proposal for a government medical plan would mean to them and to their families.

Few of the women interviewed, said the *Tribune* reporter, knew anything about the Wagner-Murray-Dingell bill. Most of them admitted that they didn't understand socialized medicine but expressed a fear that in some way it would trespass on sacred territory.

### PREPAID MEDICAL CARE NEWS

#### American Pharmaceutical Association Appoints Committee to Study Medical Care

The Council of the American Pharmaceutical Association and the Executive Committee of the N. A. R. D. at their joint meeting in 1944 suggested the appointment of a joint committee of the two associations to study and supply information on various plans that may be suggested for prepaid medical care, with special reference to the pharmaceutical phases of such plans.

The members of the committee elected Dr. Robert P. Fischelis, secretary of the American Pharmaceutical Association, as chairman. The committee is now in the process of obtaining information from medical societies, pharmaceutical associations and state boards of health on various available plans, preparatory to studying these plans.

# Medical Legislation

## MEDICAL BILLS IN CONGRESS

### Scientific Research

A revised bill, S. 1850, has been introduced proposing to promote the progress of science and the useful arts, to secure the national defense and to advance the national health and welfare. This bill was introduced by Senator Kilgore, West Virginia, for himself and Senator Magnuson, Washington, Senator Johnson, Colorado, Senator Pepper, Florida, Senator Fulbright, Arkansas, Senator Saltonstall, Massachusetts, Senator Thomas, Utah, and Senator Ferguson, Michigan. This legislation would create a National Science Foundation administered by an administrator to be appointed by the President after consultation with the National Science Board to be created by the law.

### School Lunch Programs

The House has passed H. R. 3370, to authorize the federal government to contribute $50,000,000 a year to school lunch programs. This federal fund will be matched 50-50 by participating states beginning July 1, but the bill requires that the federal government would spend $1 for each $2 expended by the states in 1948, $1 to $3 in 1949 and 1950, and $1 to $4 thereafter.

### Hearings

The Senate Committee on Education and Labor has scheduled hearings on S. 1606, the second 1945 version of the Wagner-Murray-Dingell bill, to begin March 18.

The House Committee on Ways and Means began hearings on social security legislation, February 25.

The House Committee on the District of Columbia has scheduled hearings on the Lemke antivivisection bill, H. R. 491, to begin February 28.

## STATE LEGISLATION

### California

*Bills Passed.*—A. 88-X passed the senate February 12. It proposes the creation of a State Advisory Council on Hospital Facilities and would authorize the Department of Public Health to make a survey of existing public and private hospitals and health centers in the state, to evaluate the sufficiency of such hospitals and health centers to supply the necessary physical facilities for furnishing adequate hospital, clinic and similar services to the people of the state, and to make any recommendations concerning additional facilities as may be necessary. S. C. R. 16-X passed the house February 15. It proposes a resolution requesting the state director of finance to appropriate $44,000 for the purpose of carrying out a 1945 law providing for the better protection of the public health by state licensing, inspecting, regulating and supervising of public and private hospitals.

*Bills Enacted.*—A. 35-X has become chapter 33 of the Laws of 1946. It authorizes the appropriation to the Regents of the University of California of the sum of seven million dollars for the purpose of establishing, equipping and maintaining a medical school and center as a unit in the University of California at Los Angeles. A. 37-X has become chapter 31 of the Laws of 1946. It amends the Business and Professions Code so as to increase the annual tax and registration fee of osteopaths from $5 to $10 for residents and from $2 to $10 for nonresidents. S. J. R. 7-X was filed with the secretary of state, February 11. It requires that the President of the United States and the Veterans Administration be memorialized to enter immediately into contracts with the Army and Navy to take over an adequate number of hospitals in California adequately staffed to furnish hospital facilities for veterans.

### Kentucky

*Bills Introduced.*—H. 347 proposes regulations for the licensing of manufacturers, wholesalers, jobbers and retailers of foods and drugs. S. 152, to amend the law relating to the practice of pharmacy, proposes that any one who, while in the service of the armed forces, was regularly employed for a period of not less than twelve months in the preparation and dispensing of drugs and medicines and who, in addition thereto, has successfully completed at least two years of study in a recognized college of pharmacy may apply for a pharmacist's license.

*Bills Passed.*—H. 257 passed the house February 18. To amend the law relating to divorce, it proposes to authorize the granting of a divorce when one spouse has become permanently and incurably insane and has been confined in an asylum for at least five years prior to filing the suit. In such action the court shall find from the testimony of two or more physicians competent in psychiatry that such insanity is permanently incurable. S. 109 passed the senate February 14. To amend the law relating to the practic of chiropractic, it increases the required period of academic training and adds philosophy to the list of subjects which must be studied.

### Massachusetts

*Bills Introduced.*—H. 951, to amend the law relating to medical examinatons of injured persons in connection with accident cases, proposes that, if a person injured in an accident unreasonably refuses to submit to a medical examination to be made in the presence of his physician after a written request therefor is made by or on behalf of any person from whom damages have been claimed, such refusal shall be admissible in evidence and a proper subject for comment at the trial of any action brought to recover damages for bodily injuries or death resulting from such accident. S. 407 proposes the revocation of the charter of the College of Physicians and Surgeons.

*Bill Enacted.*—H. 1468 has become chapter 33 of the Laws of 1946. It amends the law relating to the restraint of patients in mental hospitals and provides that "restraints" shall not include chemical or mechanical restraint in cases of contagious disease, during the administration of anesthesia or following an operation or accident which has caused serious bodily injury, or during the administration of shock therapy, insulin treatment or any other recognized specific therapy.

### New Jersey

*Bills Introduced.*—A. C. R. 3 proposes the enactment of an unemployment sickness compensation law. A. 91 proposes the creation of a board of chiropractic examiners to examine, regulate, license and register persons desiring to practice chiropractic. Chiropractic is defined to be "the philosophy, art, science and practice of things natural; a system of adjusting the articulations of the spinal column and adjacent tissues by hand only for the correction of the cause of disease." Licentiates would have the right "to practice chiropractic within this state and to that end shall have authority to examine patients and to diagnose and adjust for any interference with the transmission of nerve energy and to prescribe or regulate the patient's dietary, sanitary and hygienic requirements; also to use the Neurocalometer, x-ray and any other instrument for the purpose of diagnosis or analysis only, and such licensee shall have the right to employ nurses and assistants." The proposal would also declare chiropractic not to be a limited branch of medicine and surgery and would authorize a licentiate to use the title "Doctor" in connection with his name when accompanied by the name chiropractor or D.C. A. 171 proposes the creation of a Bureau of Cancer Control under the supervision of a director who shall be a duly licensed medical physician in the state qualified by training and experience to direct the work of cancer control and competent to administer cancer clinics. The bureau shall establish four cancer clinics within the state, each one under the direction of a duly licensed medical physician. A. 178, to amend the law relating to institutions designed for the care of communicable diseases, proposes to omit from the existing law the requirement that the superintendent of any such institution be a reputable, licensed and qualified physician of the state of at least five years' experience.

### New York

*Bills Introduced.*—A. Res. 68 proposes the creation of a joint legislative committee to make a survey and study of the social, educational and physical problems of individuals afflicted with cerebral palsy, with special attention to those whose muscle involvement is commonly referred to as (1) spasticity or (2) athetosis or (3) ataxia and including those who have similar central motor or sensory defects. A. Res. 70 proposes the

appointment of a joint legislative committee to make a study and investigation "of the discriminatory practices being carried on by the American College of Surgeons" with reference to barring "Negro surgeons from fellowship therein." A. 1117 and S. 1033 propose a new law relating to the licensing and regulating of the practice of barbering. Barbering is defined as the performance of certain practices, among which are the giving of facial or scalp massages with oils, creams, lotions or other preparations, either by hand or mechanical appliances to males only and another is the applying of cosmetic preparations, antiseptics, powders, oils, clays or lotions to scalp, face or neck of males only. Specifically exempted from the provisions of this proposal are duly licensed physicians, osteopaths, dentists, optometrists, nurses or physiotherapists, and hairdressers or cosmetologists. A. 1145 and S. 986 propose the creation of a temporary state commission to examine into the need for and to make recommendations relative to the creation of a state university. A. 1167, to amend the law relating to hypnotic and somnifacient drugs, would prohibit prescriptions therefor from being refilled if the prescription bears a direction to that effect. The proposal would further authorize the prescriber to indicate the number of times a prescription may be refilled. If the prescription is silent as to the refilling, then the prescription may be refilled by the pharmacist during a period of not more than six months from the original date of the prescription. A. 1170 is the same as S. 620 previously reported. To amend the law relating to action for damages for death caused by wrongful act and the distribution of the proceeds thereof, it proposes to put in the first priority of items to be paid for when damages are distributed the reasonable expenses of medical aid, nursing and attention incident to the injury causing death. A. 1179 and S. 975, to amend the workmen's compensation law, propose to authorize injured claimants to have free choice of hospitals for the treatment of injuries. A. 1200 and S. 958, to amend the education law, propose the establishment of a New York state university with, among other subjects, a school of medicine. A. 1204 and S. 1000, to amend the law relating to privileged communications, propose the waiver of such privilege by any party in interest in any litigation wherein the interests of the personal representative of the deceased patient are deemed by the trial judge to be adverse to those of the estate. A. 1223 and S. 956 propose the enactment of a new law providing for the examination, licensing and regulation of persons desiring to practice hairdressing and cosmetology. To engage in the practice of hairdressing and cosmetology means a person who "holds himself out directly or indirectly as being able, or who offers or undertakes, by any means or method, with the aid of the hands or of mechanical, electrical or other apparatus or appliances, and/or by the use of tonics, lotions, creams, cosmetics, cosmetic preparations or compounds, to waive, dye, color, bleach, cut, arrange, dress, curl, cleanse, or stimulate the growth of the hair of the head of a female person or to massage, cleanse or exercise the scalp, face, neck or arms, or manicure the nails, of such person, or to do any similar work intended to enhance the appearance of such person." Specifically exempted from the provisions of this proposal are duly licensed physicians, osteopaths, dentists, optometrists, nurses or physiotherapists and barbers. A. 1249 and S. 1099, to amend the law relating to the practice of osteopathy, propose that persons holding a license to practice osteopathy who have been granted the additional rights provided for under existing statutes and persons who shall meet all the preliminary and professional requirements required as of Sept. 1, 1936 and have satisfactorily passed or shall satisfactorily pass the regular medical licensing examination shall be granted the right to practice medicine without limitation as defined by the statutes of the state of New York. A. 1325 and S. 1149 propose the creation of a temporary commission to make a comprehensive study and analysis of the care and treatment of patients in the mental hospitals of the state who are children under 16, seniles, arteriosclerotics, alcoholics and psychopaths, and to devise and recommend ways and means of improving the care and treatment of such patients. A. 1356 and S. 1189, to amend the law relating to live pathogenic micro-organisms or viruses, propose that persons cultivating or possessing live pathogenic micro-organisms or viruses must satisfy the commissioner of health that such organisms or viruses will not become a menace to the public health and shall register with the commissioner of health. The registration must be renewed each year. A. 1442 and S. 1186, to amend the workmen's compensation law, propose that no claim for services by an x-ray laboratory or other laboratory shall be valid or enforceable unless such laboratory has obtained a license from the industrial commissioner. This proposal would not apply to an authorized and qualified physician doing his own x-ray work in connection with his own treatment of injured workmen. S. 1045, to amend the workmen's compensation law, proposes to authorize an injured employee to have free choice of a dentist when dental care and treatment are necessary. S. 1085 proposes a licensing law for persons desiring to perform scientific experiments and vivisection on living dogs. These licensing provisions would not apply to any laboratory, experimental or scientific activity conducted by the state of New York or to any agency of the federal government operating in the state of New York but every agency of the state or federal government operating in New York State, conducting scientific experiments or vivisection on living dogs, shall register with the department on a special form to be prescribed by the commissioner, without the payment of any license fee. The fee would be one thousand dollars and would be renewed annually. S. 1173, to amend the education law, proposes to require the licensing of dental laboratories. S. 1354, to amend the law relating to nonprofit medical and hospital service corporations, proposes to authorize the creation of dental expense indemnity service plans. Dental expense indemnity would consist of reimbursement for dental care provided through duly licensed dentists and of furnishing necessary appliances, drugs, medicines and supplies, prosthetic appliances, orthodontic appliances, precious metal and ceramic restorations.

*Bills Passed.*—A. 896 passed the assembly February 18. To amend the law relating to the practice of optometry, it proposes that applicants must be citizens of the United States or must have declared an intention of becoming such. A. 898 passed the assembly February 18. To amend the law relating to the practice of podiatry, it proposes that applicants must be citizens of the United States or must have declared an intention of becoming such.

## Coming Medical Meetings

Aero Medical Association, Chicago, April 7-9. Dr. David S. Brachman, 1016 Dime Building, Detroit 26, Secretary.
Alabama, Medical Association of the State of, Birmingham, April 16-18. Dr. Douglas L. Cannon, 519 Dexter Ave., Montgomery 4, Secretary.
Alaska Territorial Medical Association, Juneau, March 11-13. Dr. William P. Blanton, Juneau, Secretary.
American Association of Anatomists, Cleveland, April 4-6. Dr. Eliot R. Clark, University of Pennsylvania School of Medicine, Philadelphia 4, Secretary.
American Association of Pathologists and Bacteriologists, Chicago, March 8-9. Dr. Howard T. Karsner, 2085 Adelbert Road, Cleveland, Secretary.
American Physiological Society, Atlantic City, March 11-15. Dr. Wallace O. Fenn, 260 Crittenden Blvd., Rochester 7, New York, Secretary.
American Society for Experimental Pathology, Atlantic City, March 11-15. Dr. Harry P. Smith, 630 W. 168th St., New York 32, Secretary.
American Society for Pharmacology and Experimental Therapeutics, Atlantic City, March 11-15. Dr. Raymond N. Bieter, University of Minnesota Medical School, Minneapolis, Secretary.
American Surgical Association, Hot Springs, Va., April 2-4. Dr. Warfield M. Firor, Johns Hopkins Hospital, Baltimore 5, Secretary.
Arkansas Medical Society, Little Rock, April 14-15. Dr. W. R. Brooksher, 602 Garrison Ave., Fort Smith, Secretary.
Central States Dermatological Society, Detroit, April 27. Dr. Clarence E. Reyner, Henry Ford Hospital, Detroit, Secretary.
Chicago Medical Society Annual Clinical Conference, Chicago, March 5-8. Dr. Warren W. Furey, 30 North Michigan Ave., Chicago 2, Secretary.
Dallas Southern Clinical Society, Dallas, Texas, March 18-21. Dr. John G. Young, 1719 Pacific Avenue, Dallas 1, Director of Clinics.
Federation of American Societies for Experimental Biology, Atlantic City, March 11-15. Dr. D. R. Hooker, 19 West Chase Street, Baltimore 1, Secretary.
Florida Medical Association, Jacksonville, April 22-24. Dr. Robert B. McIver, P. O. Box 1018, Jacksonville, Secretary.
Iowa State Medical Society, Des Moines, April 17-19. Dr. John C. Parsons, 406 Sixth Ave., Des Moines 9, Secretary.
Kansas Medical Society, Wichita, April 22-25. Dr. F. R. Croson, 112 W. Sixth St., Topeka, Secretary.
Medical Library Association, New Haven, Conn., March 25-27. Miss Frida Pliefke, 2000 Medical Arts Bldg., Minneapolis 2, Secretary.
Missouri State Medical Association, St. Louis, March 24-26. Dr. Ralph L. Thompson, 634 N. Grand Blvd., St. Louis 3, Secretary.
New Orleans Graduate Medical Assembly, New Orleans, April 1-4. Dr. Joseph S. D'Antoni, 1430 Tulane Ave., New Orleans 13, Secretary.
Postgraduate Institute of the Philadelphia County Medical Society, Philadelphia, April 9-12. Dr. George P. Muller, 301 S. 21st St., Philadelphia, Director.
Southeastern Surgical Congress, Memphis, Tenn., March 11-13. Dr. Benjamin T. Beasley, 45 Edgewood Ave. S.E., Atlanta 3, Georgia, Secretary.
Tennessee State Medical Association, Knoxville, April 9-11. Dr. W. M. Hardy, 706 Church Street, Nashville, Secretary.

# Medical News

(PHYSICIANS WILL CONFER A FAVOR BY SENDING FOR THIS DEPARTMENT ITEMS OF NEWS OF MORE OR LESS GENERAL INTEREST: SUCH AS RELATE TO SOCIETY ACTIVITIES, NEW HOSPITALS, EDUCATION AND PUBLIC HEALTH.)

## ALABAMA

**Charles Thigpen Honored on Eightieth Birthday.**—The Montgomery County Medical Society gave a dinner on January 15 in honor of Dr. Charles A. Thigpen, Montgomery, who on December 19 observed his eightieth birthday. Dr. Thigpen served as president of the Medical Association of Alabama in 1935. The previous year he had received the honorary degree of doctor of laws from the University of Alabama.

**Changes in Health Officers.**—Dr. Arthur M. Shelamer, Athens, has been appointed health officer of Madison County. Dr. Maurice M. Duncan, Huntsville, has been serving in the position since Dr. William C. Hatchett, Huntsville, resigned to join the Florida State Department of Health. Dr. Carl A. F. Holler, Fort Payne, has resigned as health officer of DeKalb County to accept a similar position in Etowah County with headquarters in Gadsden, effective February 1.

## CALIFORNIA

**University News.**—The Stanford University School of Medicine, San Francisco, announces that the Winthrop Chemical Company has extended for another two years its fellowship for the training of medical graduates in the teaching and research of pharmacology.

**Industrial Hygiene Change.**—Dr. Douglas G. MacPherson, Van Nuys, formerly director of the Los Angeles City division of industrial hygiene, has been appointed chief of the Los Angeles County division of industrial hygiene. He succeeds Dr. Hugh Dierker Jr., Los Angeles, who has become medical director of the southern California division of General Motors.

**Medical Veterans Organized.**—Dr. William H. Leake, Beverly Hills, was named president of the Medical Veterans at its organization meeting in Los Angeles January 4 and Dr. Frederick A. Bennetts, Los Angeles, secretary. An executive committee was formed and directed to prepare a constitution and by-laws. The immediate objective of the new organization is to assist physicians returning from service in reestablishing their practice. Such problems as office space, purchase of surplus medical property, delay in obtaining narcotic licenses and ineligibility of physicians on terminal leave to the educational and loan provisions of the G. I. Bill of Rights will be studied through specially appointed committees.

## CONNECTICUT

**Personal.**—Dr. Emerick Friedman, senior physician at the Norwich State Hospital, has been promoted to clinical director, effective February 1.

**The Building Fund.**—The original goal of $50,000 for the building fund of the Connecticut State Medical Society has been passed. Funds will continue to be solicited, however, in the face of uncertain building costs.

## DELAWARE

**Society News.**—Dr. Thomas M. Durant, associate professor of medicine, Temple University School of Medicine, Philadelphia, addressed the New Castle County Medical Society in Wilmington, January 15, on "Recent Advances in the Etiology and Treatment of Coronary Heart Disease." Dr. Joseph Stokes Jr., professor of pediatrics, University of Pennsylvania School of Medicine, Philadelphia, addressed the society, February 19, on "Influenza and Virus Pneumonia."

## GEORGIA

**Grants for Research.**—Frederick Stearns and Company, Eli Lilly and Company and Ciba Pharmaceutical Products, Inc., have established grants to the pharmacology department of the University of Georgia School of Medicine, Augusta, totaling $5,400 for the year of 1946. These funds are to support fellowships and technical help in investigating the pharmacology of the uterus in pregnancy and dysmenorrhea. One of these fellowships will be available in September 1946, with opportunity for the fellow to take part time medical work.

**The Fischer Awards.**—Dr. C. Dixon Fowler has received the Dr. Luther C. Fischer Award for the paper showing the best original research on "A Study of Malaria on Island X in the Pacific," and Dr. Roy S. Leadingham, both of Atlanta, the Fischer Award for the best written paper on "The Medical History in Physical Diagnosis." The prizes are awarded through the Fulton County Medical Society and honor Dr. Fischer, one of the founders of the Atlanta School of Medicine, where he was professor of anatomy and clinical surgery. The awards, consisting of $100 each, were established by Dr. Fischer in 1925.

## ILLINOIS

**X-Ray Testing Program.**—On January 10 Gov. Dwight H. Green was the subject of the first x-ray in the mobile x-ray unit which is a part of a new initiated tuberculosis program conducted by the Illinois State Department of Public Health. The service is being offered to the people of the state free of charge.

**Changes in Division Heads.**—Lieut. Col. G. Howard Gowen has been appointed chief of the division of cancer control in the department of public health, effective March 1. Dr. Gowen graduated at the Northwestern University Medical School, Chicago, in 1926. He was epidemiologist for the state department of public health in 1936 and 1937. Thereafter he served as health officer of Champaign-Urbana, as administrative assistant in the Chicago Board of Health and as a member of the faculty of the Graduate School of Public Health at the University of Michigan Medical School, Ann Arbor. Lieut. Comdr. John F. Shronts, on terminal leave after nearly four years' service in the navy, has been named chief of the division of industrial hygiene, effective March 10. The position was formerly held by Dr. Milton H. Kronenberg, who resigned to become assistant to the medical director at the Caterpillar Tractor Company, Peoria. (THE JOURNAL, Oct. 14, 1944, p. 444). Dr. Shronts graduated at Northwestern University Medical School in 1936. Prior to entering the navy he was district health superintendent for the state department of public health with headquarters at Woodstock.

### Chicago

**The Ludvig Hektoen Lecture.**—The twenty-second Ludvig Hektoen Lecture of the Frank Billings Foundation will be delivered at the Palmer House, March 22, by Dr. Simeon B. Wolbach, Shattuck professor of pathologic anatomy, Harvard Medical School, Boston. His subject will be "Vitamin A Deficiency and Excess in Relation to Skeletal Growth."

**Placement Service for Psychiatrists.**—The Illinois Society for Mental Hygiene announces a new placement service for psychiatrists at 343 South Dearborn Street. A complete roster of opportunities for employment, education and fellowships in Illinois will be set up for the convenience of applicants. Inquiries may be addressed to Dr. Rudolph G. Novick, Elgin, Ill., medical director of the society. The society for mental hygiene opened a series of lectures February 1 with a talk by Dr. David Slight on "Who is Normal?" The second lecture was given by Dr. Slight February 8 on "Who is Abnormal?" Dr. John P. Spiegel explained February 14 what a psychiatrist's treatment consists of and Mr. Louis De Boer, February 21, the importance of prevention and what preventive services are available.

## INDIANA

**George Brother Heads New Bureau.**—Dr. George M. Brother, Indianapolis, recently released from military service, has been placed in charge of a new bureau of preventable diseases of the Indiana State Board of Health. The bureau will include the divisions of tuberculosis control, venereal disease control, industrial hygiene, dental health, adult hygiene and geriatrics, and communicable disease control. According to the *Journal of the Indiana State Medical Association*, grouping of these several divisions with related activities into one bureau will facilitate coordination and administration of activities and result in a more effective preventable disease program. Previous to his enlistment, Dr. Brother organized District Health Department Number 4 in the southeastern part of Indiana and later served as director of the division of local health administration with the state board of health.

## KENTUCKY

**Survey of Hospital Facilities.**—Dr. William B. Atkinson, Campbellsville, formerly state medical officer for Selective Service, has been named acting director of a newly created division of medical and related services in the state department of health. The first activity of the division is to be a survey of hospital and nursing facilities as well as a study to determine

the number of physicians in the state. The new division is the result of an executive order of Governor Simeon S. Willis.

**Changes in State Health Personnel.**—Dr. William F. Lamb, Russellville, recently returned from military service, has been appointed director of the division of venereal disease of the state department of health. Dr. Wayne L. Ritter, Louisville, on leave from the U. S. Public Health Service, has resigned as director of the bureau of industrial hygiene. Mr. W. W. Stalker is currently acting director of the division. Mr. Charles E. Tucker, recently released from military service, has been named educational director of a new cancer control program inaugurated by the state department of health in cooperation with the Kentucky Field Army of the American Cancer Society.

**Physician Honored.**—Dr. John M. Ryan, Carrollton, has been selected as the recipient of the Citizenship Award given each year by the Carrollton Chamber of Commerce to the man who, in the opinion of the organization, has rendered most valuable service to the community during the year. The citation accompanying the award announced that, "in view of his unselfish devotion to duty not only during the year of 1945 but also during the trying times forced on us by the shortages in his field during World War II, and being mindful of his contribution not only in time and in money but particularly the sacrificing of his personal health, we respectfully suggest that the Citizenship Award for the year 1945 be conferred on Dr. John Maxwell Ryan."

## MARYLAND

**Personal.**—Dr. Joseph P. Franklin, Cumberland, who has been on military leave since February 1941, has returned as deputy state and county health officer of Allegany County.

**Borden Award Goes to Edwards Park.**—The American Academy of Pediatrics presented to Dr. Edwards A. Park, Baltimore, the Borden Award, consisting of a medal and $1,000. The award is granted annually to the specialist considered to have done the best research in nutrition in the field of pediatrics. Dr. Park's work was in nutrition to combat rickets. He graduated at Columbia University College of Physicians and Surgeons, New York, in 1905 and is professor of pediatrics at Johns Hopkins University School of Medicine, Baltimore.

## MASSACHUSETTS

**Ether Centenary.**—Plans are now being made to observe the one hundredth anniversary of William T. G. Morton's demonstration of the use of ether for anesthesia. It is planned tentatively to hold symposiums during the days of October 14-16 and a special commemorative dinner Monday evening October 14.

**Hugh Cabot Memorial Fund.**—Two million dollars will be sought in a campaign by the Hugh Cabot Memorial Fund to erect a penicillin research laboratory and plant in Russia. Harlow Shapley, ScD., director of the Harvard Observatory and chairman of the national committee of the fund, indicated in a statement to the press that a campaign would be launched at a dinner February 13. Dr. Hugh Cabot died Aug. 14, 1945.

**New Appointments in Physiology.**—Hans O. Haterius, Ph.D., professor of physiology, Wayne University College of Medicine, Detroit, has been appointed professor of physiology and chairman of the department of physiology in the Boston University School of Medicine. Dr. George L. Maison, formerly assistant professor of physiology at Wayne University, has been appointed associate professor of physiology at the medical school. Dr. Maison recently was released from the Army of the United States, where he was engaged in aeromedical research. For his work in developing the anti-G suit Dr. Maison was awarded the Legion of Merit.

**Camp Miles Standish Proposed as School for Adult Mental Defectives.**—The Massachusetts Department of Mental Health, as soon as Camp Miles Standish was declared surplus property, applied to the government for purchase of the site for an institution for the care of mentally defective persons. At present it is planned that the institution will be used as an industrial and agricultural training school for the adult mental defectives who are transferred from the present schools. The vacancy thus created in the older schools will be for the admission of younger mental defectives who may be suitable for educational programs. It is planned that the institution shall have a final capacity for 2,000 mental defectives.

## MICHIGAN

**Changes in Health Personnel.**—Dr. Robert R. Scott, Beulah, recently released from military service, has been appointed director of the Mason County Health Department. Dr. Robert L. Loftin, Cynthiana, Ky., who recently resigned as health officer of Harrison County, is the new health officer of the Bay City-Bay County Health Department. Dr. Edward F. Fisher, Dearborn, resigned the presidency of the Dearborn City Council to become director of the Dearborn Department of Health and Recreation.

**New Public Relations Counselor.**—Hugh W. Brenneman, recently returned from navy service as a destroyer communication and public relations officer, was on January 19 appointed public relations counsel for the Michigan State Medical Society, with headquarters at the executive offices in Lansing. Mr. Brenneman, since his graduation from Alma College in 1936, has had varied experiences, including service with the Associated Press, as a radio announcer and as president of the Wexford-Missaukee Teachers Association.

## MINNESOTA

**Medical School Cooperates in Care of Veterans.**—A plan to add 146 physicians to the Veterans Administration Hospital, Minneapolis, through the cooperation of the University of Minnesota Medical School, was announced January 13. The program is the outgrowth of a law passed recently by Congress creating a bureau of medicine and surgery within the Veterans Administration. The program will add 35 men with rank of senior consultant, 43 consultants and 68 resident physicians or fellows. It provides placing of veterans' hospital standards on university medical school standards through direct supervision of all appointments of doctors by the dean of the university medical school; introduction of specialists drawn from all parts of the nation under supervision of a university "Dean's Committee"; setting up a fellowship system under which 68 university graduate doctors will work in the veterans' hospital on a full time basis while obtaining specialists' ratings, and ability instead of civil service status as the primary basis for appointment of physicians, with veterans given voluntary preference wherever possible. The program is similar to one described in THE JOURNAL, February 2, page 297, and to those planned for ten additional veterans' hospitals through cooperation of forty-six approved medical schools. Under the program 35 senior consultants, all specialists, will be appointed to make rounds in the hospital, aid in the treatment of special cases, hold conferences with the new staff and present resident doctors and act as consultants in difficult rehabilitation cases. The 43 men of "consultant" rank will comprise a visiting staff, spending roughly half of their time at the hospital and holding responsibility for the patients. Another 68 ward officers or resident doctors authorized will be full time resident doctors attending patients. They will be a "highly selected" group of university graduates, recommended by Dr. Harold S. Diehl, Minneapolis, who have finished internships, have had three or more years of military service and have some graduate training beyond internship. All senior consultants and consultants will be men who have qualified for certification by examining boards as specialists. Authorized by the national Veterans Administration are 61 men in surgery and surgical specialties, 65 in medicine and medical specialties and 20 in laboratory and x-ray specialties.

## MISSOURI

**First Hanau W. Loeb Lecture.**—The first annual Hanau W. Loeb Lecture was given by Edward A. Doisy, Ph.D., St. Louis, at the St. Louis Medical Society Auditorium, December 10. He discussed "Vitamin K."

**Ninety-Seven Years of Age.**—Dr. Jacob D. Smith, Shelbina, observed his ninety-seventh birthday January 25. Dr. Smith graduated at Rush Medical College, Chicago, in 1870, first locating in Shelbyville. Dr. and Mrs. Smith on February 20 celebrated their seventy-third wedding anniversary. Mrs. Smith is 94 years of age.

**Returning Faculty Members Honored.**—A dinner was held in the Hotel Statler February 27 by the Rev. Alphonse M. Schwitalla, S.J., dean of the St. Louis University School of Medicine, and the administrative board, to welcome the 70th General Hospital and faculty members returning home from service. Speakers at the dinner included Major Gen. George F. Lull, U. S. Army, and Capt. Francis J. Braceland (M.C.), U.S.N.R.

**Chemists Win Award.**—Drs. Carl F. and Gerty T. Cori, head of the department of pharmacology and associate professor of biochemical research, respectively, Washington University School of Medicine, St. Louis, on February 3 were

announced as co-winners of the second annual Midwest Award of the St. Louis section of the American Chemical Society. The award, a gold medallion, is made annually by the St. Louis section in recognition of "meritorious contribution to the advancement of pure or applied chemistry or chemical education." The formal presentation will take place March 21. The Coris received the award for their studies of the biochemistry of enzymatic reactions involved in carbohydrate metabolism. Both physicians graduated at the Deutsche Universität Medizinische Fakultät, Prague, Czechoslovakia, in 1920.

## NEW YORK

**Max Poser Dies.**—Max H. Poser, known for his research in the field of optics, died in his home in Rochester, January 4, aged 75. In 1937 Dr. Poser was made a life technical adviser of the American Academy of Ophthalmology and Otolaryngology.

**Fifty Thousand Dollars for Cancer.**—Under the will of Mrs. Ruth Wheelock, who died Nov. 26, 1945, the bulk of her "more than $50,000 estate will go to the University of Rochester School of Medicine and Dentistry . . . to become a part of its cancer research fund."

**Colgate Plans Medical Service.**—With the appointment of Dr. John H. Rathbone as university physician and director of the department of student health at Colgate University, announcement was made that the university was making plans for a new medical center which would service the community as well as the student body and faculty. Dr. Rathbone is the prospective director of the center. An alumni representative on the board of trustees, Dr. Rathbone has been a member of the faculty of the Columbia University College of Physicians and Surgeons since 1931.

**Personal.**—Dr. John C. Eccles of the University of Otago, New Zealand, lectured at a conference sponsored by the New York Academy of Sciences, February 8-9. Dr. Eccles, who attended the conference at the request of the Rockefeller Institute for Medical Research, spoke on "Physicochemical Mechanism of Nerve Activity."——Dr. Donald C. O'Connor, Buffalo, has been named superintendent of the Edward J. Meyer Memorial (City) Hospital to fill the vacancy that occurred when Dr. William T. Clark, Buffalo, resigned on July 1, 1945.——Dr. Bernard S. Strait, Penn Yan, was installed as state Kiwanis governor at a convention in Albany, January 20.——Dr. Hugh H. Shaw on December 31 resigned as health officer of Utica after holding the position for twenty-six years.

**State Care for Defective Infants.**—The New York State Department of Mental Hygiene, at the direction of Governor Thomas E. Dewey, will accept into its institutions a limited number of mentally defective infants under the age of 5. The change in policy is due to the wartime increase in the number of infant defectives, making it impossible for local facilities and private families to continue to carry the main responsibility for their care. While the number will be limited, when the postwar building programs are completed at the state schools for defectives the number admitted will be greatly expanded. Only the most urgent cases will be granted immediate admission, cases which, in the opinion of department investigators, will grant immediate relief to the infant or the infant's family. The policy of the state for many years has been against accepting infant defectives into its institutions, except for occasional emergency cases, on the theory that the care of defective infants under 5 was primarily the responsibility of the family or the local welfare units, since the nursing factor in those cases usually outweighs the mental care. A $17,000,000 postwar building expansion program at the six state schools for the mentally defective and at Craig Colony for the Epileptic has been authorized, and an additional $2,000,000 program to build children's hospitals at four of these institutions has been proposed.

**Druggist Guilty of Fatal Sulfonamide Dosage.**—Jacob Greenwald, East Elmhurst, Queens, was convicted February 11 on a charge of second degree manslaughter following the death of a baby after being treated with six times as much sulfathiazole as a physician prescribed. The excessive dosage was considered a druggist's error and Greenwald was sentenced to a minimum term of one to two years in Sing Sing. Execution of the sentence was stayed and a certificate of reasonable doubt was granted which has the effect of an appeal and calls for a ruling by the appellate division before the sentence can be carried out, newspapers reported. Commenting that this was the first sulfathiazole case in the criminal courts of New York, Judge Thomas Downs said he believed the five judges of the appellate court should review the conviction because of "the unknown lethal qualities" of the drug. During the trial Alexander O. Gettler, Ph.D., New York toxicologist, and Dr. Jacob Werne, Jamaica, assistant medical examiner, testified that medical science does not know just what constitutes a lethal dose of sulfathiazole. Testimony showed a physician had prescribed 21 grains of the drug to be administered at the rate of 3 grains each four hours. Greenwald said he misconstrued the prescription and gave the child's father 147 grains in 7 grain doses. The baby got doses of 21 grains each four hours for twenty-four hours, a total of 126 grains.

### New York City

**University News.**—Sharp and Dohme, Inc., has given $2,200 to Columbia University College of Physicians and surgeons in support of Dr. Erwin Brand's work on proteins and amino acids.

**Pamphlet on Syphilis.**—The Community Service Society of New York City prepared a pamphlet on syphilis for the use of nurses doing family work. The pamphlet is made available at 5 cents a copy on orders of 1 to 100 and 4 cents on orders of over 100. The Department of Educational Nursing can be addressed at 105 East 22d Street, New York 10.

**Alumni Day.**—On February 22 the Alumni Association of the New York University College of Medicine held its tenth annual Alumni Day. The program included a scientific session and a dinner in the evening in honor of Dr. Arthur M. Wright, who has announced his retirement as George David Stewart professor and chairman of the department of surgery. Among the speakers were:

Drs. Hervey C. Williamson, Currier McEwen and Luther E. Holt Jr., A Reevaluation of the Vitamins.
Dr. Colin M. MacLeod, Certain Aspects of Chemotherapy.
Dr. Frank W. CoTui, Protein Metabolism in Disease and Injury.
Dr. Leonard J. Goldwater, Group Medical Practice.

A feature of the dinner honoring Dr. Wright was the presentation to Harry W. Chase, chancellor of the university, of a check for $575,000, representing the amount raised by the Alumni Association in its five month campaign for the erection of an auditorium in the new New York University-Bellevue Medical Center.

**Whipple Award to "Josie and Trixie."**—On February 6 the American Museum of Natural History and the Friends of Medical Research presented a preview of a new exhibit, "Really Man's Best Friend." A feature of the event was the presentation of the first Whipple Award to "Josie and Trixie" of the School of Medicine and Dentistry of the University of Rochester. The dogs are the descendants of the original dogs used by Dr. George H. Whipple, Rochester, in his research on anemia. This award, established by the Friends of Medical Research and named for Dr. Whipple, who was given the Nobel Prize for research which led to the development of liver therapy for pernicious anemia, took the form of two leather collars bearing silver tags on which were described the services of the dogs in acting as experimental animals in blood plasma research. Josie and Trixie were brought to the ceremonies at the Museum of Natural History by Dr. Frieda S. Robbins, Rochester, Dr. Whipple's research associate of many years.

**Residencies and Fellowship in Physical Medicine.**—As one phase of its program of teaching and research in the field of physical medicine, the faculty of Columbia University College of Physicians and Surgeons, with the cooperation of a group of its affiliated hospitals, has established residencies and fellowships to provide training in physical medicine on a graduate level. The first group of residents were to be appointed by the hospitals before March 1 and will spend the months of April through June in an introductory course before beginning clinical work in the hospitals. For residencies the annual stipend varies with the hospital but includes maintenance or its equivalent. Applicants must have graduated from a medical school and have completed an internship approved by Columbia University. Applications should be submitted to the directors of the following hospitals:

Presbyterian Hospital, 620 West 168th Street, New York 32.
New York Post-Graduate Medical School and Hospital, 303 East 20th Street, New York 3.
Mount Sinai Hospital, Fifth Avenue at 100th Street, New York 29.
St. Luke's Hospital, 421 West 113th Street, New York 25.
Goldwater Memorial Hospital, Welfare Island, New York.
Montefiore Hospital, 150 East Gunhill Road, New York 67.
Hospital for Joint Diseases, 1919 Madison Avenue, New York 35.

A limited number of those who have completed the first or second years of the residency may apply for fellowships in physical medicine in Columbia University under a grant from the Baruch Committee on Physical Medicine. Fellowships are devoted to basic research related to physical medicine. The annual stipend is $2,500 without maintenance.

## OREGON

**Health Board Activities.**—The Oregon State Board of Health will soon move to new quarters at Southwest Eleventh Avenue and Salmon Street in the building formerly occupied by the Behnke-Walker business college. The action follows approval at the annual board meeting in Salem of a five year lease on two floors of the building. Recent sale of the Oregon building, in which the board now has offices, brought about the change. Changes in personnel approved by the board include the resignation of Dr. Donald J. Bourg, The Dalles, as director of the division of maternal child health. The appointments of Dr. Daniel C. Kelley, Lawrenceville, Ga., as health officer of Clatsop County and the reinstatement of Dr. Richard Wilcox, Pendleton, recently returned from military service, as health officer of Umatilla County, have been announced.

## TENNESSEE

**Twenty-Five Years as Health Officer.**—Dr. John J. Lentz on December 8 completed twenty-five years as director of the Davidson County Health Department, Nashville.

**New Pediatric Head at Tennessee.**—Dr. Frank T. Mitchell, Memphis, has been appointed professor and head of the department of pediatrics at the University of Tennessee College of Medicine, Memphis. He succeeds Dr. Edward C. Mitchell, who has been named emeritus professor. Dr. James G. Hughes has been promoted to associate professor of pediatrics and will devote his full time to the department.

**Postgraduate Activities.**—A postgraduate medical extension course in gynecology by Dr. Joseph R. B. Branch, Macon, Ga., has just closed in West Tennessee. In Memphis the registrations were so many that it was necessary to divide the Memphis group into three sections with the Millington Navy Base Medical Officers' meeting at John Gaston City Hospital with a total of forty-seven registered, the Army Medical Officers' meeting at Kennedy General Hospital with a total of forty registered, and with physicians in civilian practice of Shelby County and vicinity meeting at Methodist Hospital with a registration of 199. The course by Dr. Branch has already functioned over a period of a year in Tennessee and has included five circuits of twenty-two teaching groups with a total registration of 590. January 17 he opened a course in Nashville and vicinity with centers at Clarksville, Springfield and Dickson. The course will be given also for a group of medical officers at Camp Campbell, Meharry Medical College for a colored group and his final lecture each week with physicians of Nashville at Nashville General Hospital. This course in gynecology has been very popular among both medical officers of Tennessee on duty in various camps of army and navy establishments as well as civilian practitioners. Dr. Branch, the instructor, has just rounded out three years of postgraduate teaching in Tennessee. His first two years were spent in giving a course in surgical diagnosis in which 1,418 physicians registered and took the course in forty-seven teaching centers. One more year of instruction in gynecology in other areas in Tennessee will be given by Dr. Branch. The program is financed by contributions from the Commonwealth Fund of New York, the Tennessee State Health Department and the two medical schools of Vanderbilt and the University of Tennessee, and appropriations from the treasury of the Tennessee State Medical Association plus fees of the physicians. Mr. L. W. Kibler, who recently resigned as field director of the postgraduate course conducted by the postgraduate committee of the Oklahoma State Medical Association, now occupies a similar position with the committee on postgraduate instruction in gynecology of the Tennessee State Medical Association.

## VIRGINIA

**Coroner Goes to Korea as Missionary.**—Dr. Robert Wilson, since the fall of 1941 city coroner of Richmond, is returning to Korea early in the new year to resume his medical missionary work, which was interrupted by the war. Prior to returning to America, Dr. Wilson had spent more than thirty years in Korea.

**Joseph Barrett Named Mental Hygiene Head.**—Dr. Joseph E. Barrett, Marion, superintendent of the Eastern State Hospital, Williamsburg, has been appointed commissioner of the Virginia State Department of Mental Hygiene and Hospitals. He succeeds Dr. Hugh C. Henry, who died Oct. 14, 1945. The position at the time Dr. Henry assumed it was a newly created one provided in the state government reorganization act, effective July 1, 1942. Dr. Barrett, who graduated at the University of Tennessee College of Medicine, Memphis, in 1922, formerly was director of the Michigan state hospital commission and assistant commissioner of the Massachusetts Department of Mental Hygiene.

## GENERAL

**National Noise Abatement Week.**—April 28-May 4 has been designated National Noise Abatement Week, with the establishment of noise control on the agenda of all cities by city planning commissions as the keynote of the campaign.

**Joe Savage Named Executive Director of Infantile Paralysis.**—Mr. Joe W. Savage, Charleston, W. Va., who was recently discharged from the Army Air Force with the rank of major after more than three years' service, has been given the title of executive director of the National Foundation for Infantile Paralysis, it was announced February 13. The appointment of Mr. Savage to the foundation was reported in THE JOURNAL, Oct. 6, 1945, page 472.

**Plotz Foundation for the Advancement of Scientific Investigation.**—During 1945, the twenty-second year of the Ella Sachs Plotz Foundation for the Advancement of Scientific Investigation, thirty-eight applications for grants were received by the trustees, twenty-five of which came from the United States, the other thirteen coming from five different countries in Europe, Asia and North and South America. In the twenty-two years of its existence the foundation has made 531 grants, which have been distributed to scientists throughout the world.

**Panel on Juvenile Delinquency.**—Twenty-eight persons, each prominent in his field, were named by Attorney General Tom C. Clark February 9 as a national volunteer advisory panel to study the growing problem of juvenile delinquency. The attorney general said that the panel was not limited to the number announced and that others would be named from time to time. The panel was created to assist the department of justice in the formulation of plans to combat the upsurge in serious crimes being committed by teen-agers, both boys and girls.

**Scott Awards Go to Goodpasture and Cohn.**—On January 17 the John Scott Award, given by the Philadelphia Board of City Trusts, went to Dr. Ernest W. Goodpasture, professor of pathology and dean of the Vanderbilt University School of Medicine, Nashville, for his "development of a method for the cultivation of viruses that have made hitherto unknown vaccines possible." Edwin J. Cohn, Ph.D., professor of biochemistry, Harvard Medical School, Boston, received a similar award for developing "a substitute for dried blood plasma used in the treatment of shock in the war."

**Examination in Orthopedic Surgery.**—The American Board of Orthopaedic Surgery announces that examinations (part I) are scheduled to be given in New Orleans May 3-4, St. Louis and San Francisco May 10-11, and Philadelphia May 17-18. Applications must be received by the secretary on or before March 10. Part I of the examination will not be repeated until the spring of 1947. Part II will be given in Chicago in January 1947 preceding the meeting of the American Academy of Orthopaedic Surgeons. Correspondence and applications related to part I of the examinations should be sent to Dr. Guy A. Caldwell, 3503 Prytania Street, New Orleans 15. After July 1 all correspondence and applications for part II should be sent to Dr. Francis M. McKeever, 1130 West 6th Street, Los Angeles 14.

**Arthritis Research Foundation Formed.**—Establishment of a National Arthritis Research Foundation was announced at a meeting in the Blackstone Hotel, Chicago, February 10. A campaign for $2,500,000 will be launched to set up the foundation as a national and independent center for studying the cause and treatment of rheumatic diseases. The main buildings will be located in Hot Springs National Park. Present officers of the foundation include Judge A. B. Frey, St. Louis, president, and Mr. Walter W. Head, president of the General American Life Insurance Company, treasurer. As president of B'nai B'rith, which founded the Levi Memorial Hospital, Mr. Henry Monsky, Omaha, has been designated as honorary chairman of the campaign. Hon. Allen May, president, Mutual Life Insurance Company of St. Louis, is chairman of the insurance division. Mr. Louis Kranitz, St. Joseph, Mo., is chairman of the national campaign committee. The creation of the foundation stemmed from the plan of the Leo N. Levi Memorial Hospital, Hot Springs, Ark., to develop a research wing. Instead the hospital abandoned its own plans to assist in the creation of the national foundation.

# Deaths

**Henry Wellman Emile Walther** ✠ New Orleans; Medical Department of Tulane University of Louisiana, New Orleans, 1910; born in New Orleans, Sept. 7, 1888; appointed professor and head of the department of urology at the Graduate School of Medicine of the Louisiana State University Medical Center in 1937; member of the House of Delegates of the American Medical Association from 1932 to 1935 and chairman of the Section on Urology, 1937-1938; specialist certified by the American Board of Urology, Inc.; member of the American Urological Association and co-founder of the Southeastern Branch, of which he had been president in 1936; treasurer of the Orleans Parish Medical Society, 1917-1918; co-founder and past president of the Louisiana Urological Society and the New Orleans Social Hygiene Society; member of the Southeastern Surgical Congress, American Neisserian Society, Southern Medical Association, serving as chairman of its section on urology in 1923, and the Louisiana State Medical Society, serving as chairman of its section on urology in 1927; fellow of the American College of Surgeons; vice president of the second Pan American Medical Congress; assistant surgeon, U. S. Public Health Service, during World War I; consulting urologist on the medical advisory board, Selective Service System, during World War II; served on the staffs of the Southern Baptist Hospital, Charity Hospital, U. S. Marine Hospital, Illinois Central Railway Hospital and the Hotel Dieu; member of the Art Association of New Orleans, serving as president from 1930 to 1934, Isaac Delgado Museum of Art, serving as vice president, and the Friends of the Howard-Tilton Memorial Library of Tulane University, of which he had been co-founder and past president; in 1937 resigned as editor of the *New Orleans Medical and Surgical Journal;* died January 6, aged 57.

**William Jepson** ✠ Sioux City, Iowa; born in Aarhus, Denmark, June 29, 1863; State University of Iowa College of Medicine, Iowa City, 1886; University of Pennsylvania Department of Medicine and Jefferson Medical College, Philadelphia, 1891; licentiate of the Royal College of Physicians, Edinburgh, Royal College of Surgeons, Edinburgh, and Royal Faculty of Physicians and Surgeons of Glasgow, 1897; an Affiliate Fellow of the American Medical Association, serving as a member of its House of Delegates in 1906-1907, 1926, 1928, 1929 and 1930; past president of the state board of medical examiners, Tri-State Medical Society, Iowa Clinical Surgical Society, Iowa State Medical Society, Woodbury County Medical Society and the Sioux Valley Medical Society; past state chairman for the American Society for the Control of Cancer; member of the Western Surgical Association; fellow of the American College of Surgeons and the International College of Surgeons; since 1938 professor emeritus of surgery at the State University of Iowa College of Medicine in Iowa City, where he was professor and head of the department of surgery from 1902 to 1913; formerly professor of surgery at the Sioux City College of Medicine; served as a member of the faculty of medicine of the University of South Dakota; member of the founders group of the American Board of Surgery; surgeon of the 56th Regiment of the Iowa National Guard from 1907 to 1916 with the rank of major; during 1916 and 1917 served as surgeon of the Second Iowa Regiment on the Mexican border and during World War I was chief surgeon at the Base Hospital, Camp Bowie, Texas; active in establishing St. Joseph Hospital; died November 30, aged 82, of urinary obstruction and uremia.

**Isaac Hall Manning,** Chapel Hill, N. C.; Long Island College Hospital, Brooklyn, 1897; born in Pittsboro, Sept. 14, 1866; since 1939 Kenan professor emeritus of physiology at the University of North Carolina School of Medicine, where he had been professor of physiology since 1901 and dean from 1905 to 1933; in 1933 president of the Medical Society of North Carolina, of which he had been an honorary member; president of the Hospital Savings Association of North Carolina, Inc., from the time of its organization in 1935 until 1942, when he became chairman of the board of medical directors; member of the American Medical Association; fellow of the American College of Physicians; in 1940 the Alumni Association of the University of North Carolina School of Medicine presented his portrait to the university; died February 12, aged 79.

**David Alfred Horner** ✠ Chicago; Rush Medical College, Chicago, 1908; assistant professor of obstetrics and gynecology at the Northwestern University Medical School; served with the British Expeditionary Force and the American Expeditionary Forces during World War I and was awarded the Distinguished Service Cross; specialist certified by the American Board of Obstetrics and Gynecology, Inc.; member of the Central Association of Obstetricians and Gynecologists; served as president of the Chicago Gynecological Society; fellow of the American College of Surgeons; served on the staff of the Chicago Lying-in Hospital; died in the Michael Reese Hospital November 8, aged 61, of pyelonephritis, prostatic hyperplasia and unipolar spongioblastoma.

**Edwin Phillip Wolfe** ✠ Colonel, U. S. Army, retired, Palo Alto, Calif.; Columbian University Medical Department, Washington, D. C., 1896; veteran of the Spanish-American War; in the medical supply department at Washington, D. C., during World War I; for his work as officer in charge of getting supplies overseas awarded the Distinguished Service Medal; fellow of the American College of Surgeons; entered the army as assistant surgeon in January 1899; rose through the various grades and promoted to colonel in 1917; retired Aug. 13, 1929 for disability in line duty; died in the Dibble General Hospital, Menlo Park, January 8, aged 74, of dissecting aneurysm of the aorta with rupture into the right pleural cavity.

**Edward William Koch** ✠ Buffalo; Rush Medical College, Chicago, 1911; since 1930 dean and since 1918 professor of pharmacology at the University of Buffalo School of Medicine, where he had been secretary of the faculty from 1918 to 1928 and acting dean from 1928 to 1930; since 1936 dean of the University of Buffalo Dental School; instructor in physiology and pharmacology at the Indiana University from 1913 to 1915; pharmacologist at Eli Lilly & Company from 1915 to 1918; fellow of the American Association for the Advancement of Science and the Indiana Academy of Science; served an internship at the Presbyterian Hospital in Chicago; died February 9, aged 64.

**Charles M. Allmond,** Carrcroft, Del.; Hahnemann Medical College and Hospital of Philadelphia, 1889; formerly mayor and secretary of the board of health in Newark; at one time member of the Homeopathic Medical Society Examining Board; for many years on the staff of the Memorial Hospital, Wilmington, where he died November 2, aged 79.

**Arthur G. Altham** ✠ Sheldon, Mo.; University Medical College of Kansas City, 1905; honorary member of the Missouri State Medical Association; died October 29, aged 66.

**Jesse Earle Ambler** ✠ Ford City, Pa.; Hahnemann Medical College and Hospital of Philadelphia, 1908; found dead November 23, aged 66.

**Edward Thomas Anderson,** Excelsior, Minn.; Sioux City (Iowa) College of Medicine, 1897; served during World War I; died in the Veterans Administration Facility, St. Cloud, November 1, aged 76, of arteriosclerotic heart disease.

**Sullivan Lane Andrews,** Lewiston, Maine; Medical School of Maine, Portland, 1901; member of the American Medical Association; past president of the Androscoggin County Medical Society; fellow of the American College of Surgeons; past president of the staff of the Central Maine General Hospital, where he served for many years and where he died November 26, aged 68.

**William A. Borin,** Bartonville, Ill.; Medical Department of Grant University, Chattanooga, Tenn., 1891; member of the American Medical Association; on the staff of the Methodist Hospital in Peoria; died November 5, aged 79, of cerebral hemorrhage.

**Patrick Stephen Brady,** Hays, Kan.; Kansas City (Mo.) College of Medicine and Surgery, 1921; member of the American Medical Association; served during World War I; county health officer; on the staff of St. Anthony's Hospital; died November 12, aged 56, of coronary thrombosis.

**James Henry Brennan,** New Rochelle, N. Y.; Long Island College Hospital, Brooklyn, 1898; on the staff of the New Rochelle Hospital; died November 26, aged 72, of bronchopneumonia.

**Henry Edward Briody,** Paterson, N. J.; Jefferson Medical College of Philadelphia, 1909; died November 26, aged 65, of coronary occlusion.

**Lester Rupert Brown** ✠ Laconia, N. H.; University of Vermont College of Medicine, Burlington, 1899; served as county coroner and as city and county physician; died November 1, aged 71, of coronary thrombosis.

**William Bates Buckner,** Jacksonville Beach, Fla.; Tulane University of Louisiana School of Medicine, New Orleans, 1935; member of the American Medical Association; first lieutenant, medical reserve corps, U. S. Army, not on active duty; in 1938 elected health commissioner of Dougherty County with headquarters in Albany, Ga.; served a residency at the Florida State Hospital in Chattahooche; died November 11, aged 39, of coronary thrombosis.

newly created one provided in the state government reorganization creation of the national foundation.



**Thomas B. Budge,** Logan, Utah; Northwestern University Medical School, Chicago, 1905; also a D.D.S.; fellow of the American College of Surgeons; served as associate medical director and head of the eye, ear, nose and throat department, William Budge Memorial Hospital; died November 22, aged 67, of hypertension and cerebral embolism.

**Robert Hiram Butler** ✠ Bellefontaine, Ohio; Miami Medical College, Cincinnati, 1906; member of the American Academy of Ophthalmology and Otolaryngology; fellow of the American College of Surgeons; specialist certified by the American Board of Otolaryngology; served during World War I; president of the board of trustees of the Bellefontaine Library; died November 21, aged 64, of injuries received in an automobile accident.

**Delia Caldwell,** Carbondale, Ill.; Northwestern University Woman's Medical School, Chicago, 1896; formerly practiced in Paducah, Ky., where she served as president of the board of education; at one time vice president of the Kentucky State Medical Association; assistant professor, college physician, emerita, Southern Illinois Normal University; died November 28, aged 85, of nephritis.

**Maggie Annettie Campbell,** Davenport, Iowa; Hering Medical College, Chicago, 1905; died November 26, aged 86, of bronchopneumonia.

**Emanuel Charbonneau,** Van Nuys, Calif.; Milwaukee Medical College, 1909; served during World War I; contract surgeon in the U. S. Army; died in the DeWitt General Hospital, Auburn, November 23, aged 63, of bronchopneumonia secondary to carcinoma.

**C. Hermann Claus** ✠ Newark, N. J.; Georg August-Universität Medizinische Fakultät, Göttingen, Prussia, Germany, 1919; on the staff of St. Vincent's Hospital, Montclair, where he died November 30, aged 54, of virus pneumonia.

**Frank Di Cosola,** Chicago; College of Physicians and Surgeons of Chicago, School of Medicine of the University of Illinois, 1912; served during World War I; on the staffs of the West Suburban Hospital, Oak Park, and the Mother Cabrini Memorial Hospital; died November 26, aged 57, of coronary occlusion.

**Frederick Edward Dargatz** ✠ Kinsley, Kan.; University Medical College of Kansas City, Mo., 1913; served during World War I and as health officer of Edwards County and as director of the health unit of Ardmore, Okla.; died in the Bethel Deaconess Hospital, Newton, November 30, aged 59, of coronary occlusion and cerebral thrombosis.

**William Rowland Davies** ✠ Scranton, Pa.; University of Pennsylvania Department of Medicine, Philadelphia, 1899; past president and secretary of the Lackawanna County Medical Society; served as vice president of the American Physicians' Art Association; member of the House of Delegates of the American Medical Association, 1913-1914; chief surgeon on the staff and member of the board of directors of the West Side Hospital, where he died November 20, aged 70, of coronary thrombosis.

**Louis George D'Elia,** Jersey City, N. J.; University of Tennessee College of Medicine, Memphis, 1931; died November 25, aged 40, of coronary thrombosis.

**Libeus Marshall Denman,** Cincinnati; Cincinnati College of Medicine and Surgery, 1876; for many years a medical examiner for the Prudential Life Insurance Company; died November 30, aged 94, of hypertensive heart disease.

**Nathan Freeman Doleman** ✠ Tintah, Minn.; Boston University School of Medicine, 1901; served as health officer; on the staff of St. Francis Hospital in Breckenridge; died in Wellington, Kan., November 8, aged 68, of arteriosclerosis.

**John Edmund Doran,** Atascadero, Calif.; Minneapolis College of Physicians and Surgeons, medical department of Hamline University, 1898; died October 29, aged 73.

**Helena Eleanor Enz,** Kansas City, Mo.; Kansas City (Mo.) Hahnemann Medical College, 1912; died in the Trinity Lutheran Hospital November 25, aged 59.

**John Robert Espey** ✠ Trinidad, Colo.; Jefferson Medical College of Philadelphia, 1889; past president of the Colorado State Medical Society; in 1930 member of the House of Delegates of the American Medical Association; fellow of the American College of Surgeons; served during World War I; major, medical reserve corps, U. S. Army, not on active duty; surgeon at the Mount San Rafael Hospital; died November 24, aged 81, of cerebral hemorrhage.

**Maurice Exiner** ✠ Brentwood, N. Y.; University and Bellevue Hospital Medical College, New York, 1911; served during World War I; died November 23, aged 56, of coronary thrombosis.

**Walter William Frank,** Lombard, Ill.; Bennett Medical College, Chicago, 1910; examining physician for the local draft board, many insurance companies and civil service in the area bounded by Oak Park and the Fox River valley; died in Elmhurst November 23, aged 60.

**Powell Beal Gardner** ✠ Guthrie, Okla.; Tulane University of Louisiana School of Medicine, New Orleans, 1915; member of the city council; on the staff of the Cimarron Valley Wesley Hospital; died November 26, aged 56, of coronary thrombosis and ileitis with gangrenous bowel.

**Ross Holland Gregory,** Fontanelle, Iowa; Kentucky School of Medicine, Louisville, 1893; died November 7, aged 75, of cerebral hemorrhage.

**Cesidio Arthur Guarini,** Boston; Middlesex College of Medicine and Surgery, Cambridge, 1919; died November 14, aged 53.

**John Lewis Haddox,** Knoxville, Tenn.; Tennessee Medical College, Knoxville, 1903; died in St. Mary's Hospital November 19, aged 72.

**Frederick S. Halm,** Sand Springs, Okla.; Kansas City (Mo.) Medical College, 1901; died in the Mercy Hospital, Tulsa, November 12, aged 67.

**Paul E. Harper,** Dry Ridge, Ky.; University of Louisville School of Medicine, 1935; member of the American Medical Association; interned at St. Elizabeth Hospital in Covington; began active duty in the medical corps, Army of the United States, on Oct. 1, 1942; relieved from active duty Nov. 1, 1944; died October 22, aged 35.

**John Ramsey Harrison,** Greer, S. C.; University of Tennessee College of Medicine, Memphis, 1923; died in the General Hospital, Greenville, November 22, aged 53, of a fractured skull received in a fall.

**Evert Clarence Hartman** ✠ Janesville, Wis.; Northwestern University Medical School, Chicago, 1908; served as president of the Rock County Medical Society; served during World War I; affiliated with the Pember-Nuzum Clinic; member of the staffs of the Pinehurst Sanatorium and the Mercy Hospital, where he died November 30, aged 63, of coronary thrombosis and diverticula of the colon with hemorrhage.

**Walter A. Hazelton,** Hayward, Wis.; Chicago Homeopathic Medical College, 1892; died November 11, aged 77, of coronary occlusion.

**Louis Kaufman Henschel,** Huntington, N. Y.; Columbia University College of Physicians and Surgeons, New York, 1906; served overseas during World War I; at one time surgeon in the U. S. Public Health Service Reserve; formerly on the staffs of the New Jersey State Hospital in Greystone Park, Bellevue Hospital and the U. S. Veterans Bureau in New York; died in the Huntington Hospital November 27, aged 66, of cardiovascular renal disease.

**Harry Joseph Herzstein** ✠ Pittsburgh; Medico-Chirurgical College of Philadelphia, 1905; died November 26, aged 63, of coronary thrombosis.

**Warren La Rue Hogue,** Montpelier, Ohio; Michigan College of Medicine and Surgery, Detroit, 1890; died in Alvordton November 17, aged 82, of carcinoma of the lungs.

**Spencer Stoddard Howe** ✠ Bellingham, Wash.; Rush Medical College, Chicago, 1903; specialist certified by the American Board of Ophthalmology and the American Board of Otolaryngology; member of the American Academy of Ophthalmology and Otolaryngology and the Pacific Coast Oto-Ophthalmological Society; fellow of the American College of Surgeons; served during World War I; on the staffs of St. Luke's General Hospital and St. Joseph's Hospital, where he died November 8, aged 69, of coronary occlusion.

**William Johns** ✠ Wilkinsburg, Pa.; University of Pittsburgh School of Medicine, 1908; died November 19, aged 65.

**Joseph Warren Johnson,** Los Angeles; University of Arkansas School of Medicine, Little Rock, 1938; member of the American Medical Association; interned at the Los Angeles County Hospital; died November 12, aged 35.

**Arthur Proschold Kaelber** ✠ San Francisco; Cooper Medical College, San Francisco, 1903; died recently aged 66.

**John Lawrence Keane,** Dubuque, Iowa; Creighton University School of Medicine, Omaha, 1926; member of the American Medical Association; died in Dyersville November 3, aged 49, of coronary embolism.

**Marie Sarah Ella Kinner,** Pittsburgh; Howard University College of Medicine, Washington, D. C., 1919; member of the American Medical Association; died in the Allegheny General Hospital November 30, aged 52, of glomerulonephritis.

**Kristine Mann** ✠ New York; Cornell University Medical College, New York, 1913; died in the New York Hospital November 12, aged 71, of carcinoma of the breast.

**William Elmer Marsh** ✠ Eldora, Iowa; State University of Iowa College of Medicine, Iowa City, 1891; served as secretary of the Hardin County Medical Society; died November 10, aged 79, of senility.

**Hobart Earle Martin** ✠ Clinton, Iowa; State University of Iowa College of Homeopathic Medicine, Iowa City, 1901; served two terms as president of the Clinton County Medical Society; member and past president on the staffs of the Jane Lamb Memorial and St. Joseph Mercy hospitals; member of the Iowa State Historical Society; died November 15, aged 67, of coronary thrombosis.

**Conley Pinkney McEachern** ✠ Geneva, Ala.; Medical College of Alabama, Mobile, 1896; died November 19, aged 73, of cardiorenal disease and influenza.

**John McQuade** ✠ San Francisco; College of Physicians and Surgeons of San Francisco, 1918; on the staff of Mary's Help Hospital; died November 17, aged 68.

**Robert Mabry Miller** ✠ Belton, Mo.; St. Louis University School of Medicine, 1905; served three terms on the school board; president of the township board and bank president; died in the Research Hospital, Kansas City, November 9, aged 66, of coronary thrombosis.

**Charles Burdette Pillsbury** ✠ Ypsilanti, Mich.; University of Michigan Homeopathic Medical School, Ann Arbor, 1918; specialist certified by the American Board of Radiology, Inc.; member of the Radiological Society of North America, Inc.; past president of the Washtenaw County Medical Society; on the staffs of the Ypsilanti State Hospital and the Beyer Memorial Hospital, where he died recently, aged 53, of coronary thrombosis.

**Victor Strong Randolph** ✠ Phoenix, Ariz.; University of California Medical School, San Francisco, 1923; fellow of the American College of Surgeons; member of the American College of Chest Physicians; on the staffs of the State Welfare Sanatorium, Tempe, Good Samaritan and St. Joseph's hospitals; died November 6, aged 52.

**William Isaac Robey,** Herndon, Va.; George Washington University School of Medicine, Washington, D. C., 1902; member of the American Medical Association; died in Washington, D. C., October 5, aged 67.

**Robert Hunter Scott,** Newark, N. J.; Medical College of Virginia, Richmond, 1901; member of the American Medical Association; at one time professor of obstetrics at his alma mater; specialist certified by the American Board of Pediatrics, Inc.; on the staffs of the Babies Hospital-Coit Memorial, Newark City Hospital, Presbyterian Hospital and the Hospital of St. Barnabas and for Women and Children; died November 21, aged 69, of coronary thrombosis.

**William Otto Seemann,** La Crosse, Wis.; State University of Iowa College of Homeopathic Medicine, Iowa City, 1895; served as a member of the board of health in Eau Claire, where he was on the staff of the Sacred Heart Hospital; a medical officer during World War I; died November 9, aged 75, of arteriosclerosis.

**Charles Urban Smith** ✠ Baltimore; University of Maryland School of Medicine, Baltimore, 1889; also a graduate in pharmacy; emeritus professor of theory and practice of medicine and gastroenterology at the Maryland Medical College of Baltimore; one of the founders of the Franklin Square Hospital; on the staffs of the South Baltimore General Hospital and the Maryland General Hospital, where he died November 12, aged 77.

**William Arthur Toomer,** Tupelo, Miss.; University of Louisville (Ky.) Medical Department, 1909; member of the American Medical Association; on the staff of the North Mississippi Community Hospital, where he died November 22, aged 61, of coronary thrombosis.

**Francis Whittle Upshur** ✠ Richmond, Va.; Medical College of Virginia, Richmond, 1897; served in the medical corps of the U. S. Navy during World War I; first full time venereal disease control officer in Richmond; formerly on the staff of the Eastern State Hospital at Williamsburg; associated with the medical staff of the induction center in Richmond until he became ill; for many years executive surgeon of the Virginia Electric and Power Company; died October 25, aged 70, of carcinoma of the lungs.

**Chauncey Albert Walker** ✠ Louisville, Ohio; Ohio Medical University, Columbus, 1898; affiliated with the Mercy and Aultman hospitals in Canton; died October 28, aged 72, of cerebral hemorrhage.

**Lawrence W. White,** Washington, D. C.; National University Medical Department, Washington, D. C., 1902; formerly assistant to the director of health, Indian Service, Department of the Interior; died in the Washington Sanitarium, Takoma Park, Md., October 16, aged 73, of carcinoma.

**Carl August Wickland,** Los Angeles; Dunham Medical College, Chicago, 1900; died November 13, aged 84.

**Otis Monroe Wiley** ✠ Syracuse, N. Y.; New York Homeopathic Medical College and Hospital, New York, 1902; member of the Syracuse Academy of Medicine; member of the examining board of the U. S. Army; president of the staff of the old Syracuse Homeopathic Hospital, now known as the Syracuse General Hospital, where he was a member of the consulting staff and where he died October 30, aged 77, of lobar pneumonia, partial intestinal obstruction and diverticulitis.

**Claiborne Willcox** ✠ Norfolk, Va.; University of Virginia Department of Medicine, Charlottesville, 1915; past president of the Norfolk County Medical Society; medical officer in the medical corps of the U. S. Army abroad during World War I; on the staffs as chief of the pediatric service of the Hospital of St. Vincent de Paul and the Norfolk General Hospital, where he died December 30, aged 55, of coronary thrombosis.

**Elvira Willis** ✠ New York; University of Minnesota Medical School, Minneapolis, 1925; attending pediatrician to the New York Infirmary for Women and Children, where she died October 23, aged 47, of carcinoma.

**Earl Corson Wood,** Columbus, Ohio; Starling Ohio Medical College, Columbus, 1911; member of the Columbus Academy of Medicine; served overseas during World War I; member of the staffs of Mount Carmel and St. Ann's hospitals; died October 14, aged 64, of acute bronchopneumonia and paralysis agitans.

**Archibald Lee Yearwood,** Fayetteville, Tenn.; Vanderbilt University School of Medicine, Nashville, 1901; died October 28, aged 76.

## DIED WHILE IN MILITARY SERVICE

**Paul Ashland Brickey** ✠ Colonel, M. C., U. S. Army, St. Louis; St. Louis University School of Medicine, 1918; Army Medical School and the Medical Field Service School in 1926; fellow of the American College of Surgeons; served during World War I; entered the medical corps of the U. S. Army as a first lieutenant on Feb. 13, 1925; promoted through the various ranks to that of colonel in July 1943; held the Bronze Star and Legion of Merit; recently returned from three and one-half years' service in the Pacific war zone; had charge of army hospitals in the Philippines and Honolulu prior to and during World War II; died in St. Louis Sept. 11, 1945, aged 50, of coronary occlusion.

**Victor F. Krakes,** Keeseville, N. Y.; Long Island College Hospital, Brooklyn, 1928; member of the American Medical Association; had been affiliated with the Champlain Valley and Physicians hospitals, both in Plattsburg; began active duty as a lieutenant commander in the medical corps of the U. S. Naval Reserve in September 1942; died somewhere in the Pacific area July 29, 1945, aged 42, of an intraspinal injury received in a motor vehicle accident.

**Samuel Hugh Lumpkin,** Amarillo, Texas; Baylor University College of Medicine, Dallas, 1937; interned at the Baylor University Hospital in Dallas; externed at the Dallas Medical and Surgical Clinic in Dallas; on the staffs of the Northwest Texas and St. Anthony's hospitals; member of the junior chamber of commerce; in December 1939 commissioned a first lieutenant in the medical corps and assigned to the medical detachment of the 131st Field Artillery, Texas National Guard; trained at Brownwood with the 36th Division; on Nov. 11, 1941 the 131st Field Artillery was split up and the battalion now known as the "lost battalion" was organized with him as a member; promoted to captain; died in a prisoner of war camp in Burma Aug. 1, 1943, aged 30, of acute dysentery.

**Paul Bernard Young** ✠ Wichita, Kan.; University of Kansas School of Medicine, Kansas City, 1935; interned at the Wesley Hospital, where he was a member of the staff; on the staff of the Wichita Hospital; began active duty as a first lieutenant in the medical corps, Army of the United States, on Sept. 1, 1942; promoted to captain; killed in an airplane crash near Lebanon, Tenn., November 10, aged 35.

thrombosis.

Hospital November 30, aged 52, of glomerulonephritis.



# Foreign Letters

## LONDON

*(From Our Regular Correspondent)*

Jan. 26, 1946.

### The Social Insurance Plan

Three years after the publication of the Beveridge report on social insurance a national insurance bill embodying the proposals, with a few modifications, has been formulated by the government. This measure is the climax of a socialistic trend in British legislation for many years. It should be remembered that the Beveridge plan was produced by a coalition government in which the conservative party was dominant.

The main weekly benefits under the bill are for sickness and unemployment $5, with $3 for a dependent and $1.50 for the first child; retirement pension $5, widow's allowance $7, maternity allowance $7, attendance allowance $4, maternity grant $16, death grant $80. The cost of benefits is estimated at $1,808,000,000 in 1949, of which about a third will be paid by the exchequer, which will also finance the cost of a family allowance plan, $240,000,000. For the employee the weekly contribution is $1 and for the employer $0.75.

Free medical attendance, which includes every form of treatment—general practitioner, consultant and specialist, domiciliary and hospital—is to be provided for all. Details have not yet been published, as the negotiations with representatives of the medical profession are in progress and the decisions of the government remain to be announced. It is unfortunate that these will be made by a socialist government. With the previous coalition government a more balanced consideration of the various interests involved could be expected.

### Cancer Research

The annual report of the British Empire Cancer Campaign is based on work done in many laboratories in Britain and the dominions. At the laboratories of the Middlesex Hospital an attempt was made to complete the synthesis of the stilbestrol series. It did not yield any substance of greater activity than diethylstilbestrol. Intensive research is being carried out on the metabolism of synthetic estrogens, especially in relation to cancer of the prostate and breast. At present the use of estrogens in inoperable cancer of the breast has not given conclusive results. A study of the pathology of cancer of the colon at St. Mark's Hospital shows a less malignant tumor to be more common in the colon than in the small intestine. The histology of the primary tumor, the extent of venous spread and the incidence of lymphatic metastases reveal that cancer of the colon is a relatively favorable field for surgery. In cancer of the rectosigmoid region about half the patients who survived a combined excision of the rectum were alive after five years. The best prospects of survival were found in cases without local spread beyond the rectal muscle, without detectable venous spread or lymphatic metastases. The survival rate in these patients was 82 per cent. At the Cambridge University Research Center studies were made by means of serial biopsies of the effects of x-rays and gamma rays. In carcinoma of the cervix anaplastic growths often fail to respond to irradiation. At the Marie Curie Hospital a study of the treatment of uterine cancer with radium was continued. Of 1,410 patients with cancer of the cervix treated over five years ago 36.9 per cent are alive. Radium alone appears to be the method of choice until a combined radium and x-ray technic can be found which will deliver adequate radiation without increasing intestinal morbidity. About 500 cases of cancer of the larynx and pharynx treated at London hospitals have been analyzed. Males predominated over females in a ratio of 10 to 1 except in the oropharynx, where the numbers were nearly equal, and in the postcricoid region, where there was a ratio of 3 women to 1 man. Only 19 of 384 persons with cancer of the pharynx survived five years, and 26 of 124 with cancer of the larynx. In early cases laryngofissure gave a survival rate of 91 per cent of the normal expectation of life over a five year period. An investigation was made as to the effect of tobacco and alcohol. Of 307 males 232 were said to smoke in moderation, 64 smoked to excess and 11 were nonsmokers. Of 291 patients 227 used alcohol in moderation and 27 to excess, while 37 were total abstainers.

### Treatment of Acute Prolapse of the Uterus

A new treatment of acute prolapse of the uterus has been described in the *British Medical Journal*. It was discovered by accident. A woman aged 31 had been spontaneously delivered of her second child. As there was moderate hemorrhage, Credé's expression of the placenta was performed and the uterus became completely inverted. It was at once replaced in the vagina, but further manipulation was considered inadvisable because of shock. An obstetric surgeon, Mr. J. V. O'Sullivan, saw her seventy minutes after the inversion. She was pale and sweating, with a blood pressure of 80/50 and a pulse rate of 140. On separation of the labia the fundus of the uterus could be seen with the placenta. The treatment of shock included 3 pints of blood. Three hours later the patient had improved greatly and replacement by taxis was attempted with ether anesthesia. This caused rapid deterioration of her condition, so a douche was given preparatory to a later attempt. When the douche was given the tip of the nozzle, guarded by the fingers, was passed toward the posterior fornix. The surgeon's forearm blocked the vaginal orifice, the vagina ballooned out and the uterus promptly returned to its correct position. The signs of shock rapidly disappeared, and unintèrrupted recovery followed.

In a second case inversion of the uterus took place in the third stage of labor, and two large tears occurred in an attempt to strip off the placenta. The patient's condition became desperate, with a blood pressure of 70/40. O'Sullivan saw her nine hours after inversion, when she had improved sufficiently to warrant further treatment. Under light open ether anesthesia the uterus was gently delivered through the vagina and the adjacent peritoneal cavity was inspected through the tears. The oviducts and ovaries were found normal. The two tears were repaired. Gentle taxis failed to replace the uterus. In spite of the ruptured uterus, which had been sutured, it was decided to attempt to replace it by hydraulic pressure. The vagina was distended to capacity by a dettol and proflavine douche, which was retained by blocking the outlet with the forearm aided by the assistant's hands. The position of the uterus was corrected, the douche can being held 2 to 3 feet above the vagina. Complete recovery followed.

O'Sullivan recommends immediate replacement of the uterus as soon as inversion occurs, before shock develops, without attempting to remove the placenta. If the patient is in shock, clean the uterus and change the complete inversion to an incomplete by gently replacing it in the vagina, then raise the foot of the bed, place a sterile pad on the vulva and treat for shock. When shock is controlled replace the uterus by hydraulic pressure, as described. Other obstetricians have reported cases in which hydraulic pressure was successful.

### A Hospital for Tropical Diseases

In his presidential address to the Royal Society of Tropical Medicine and Hygiene Dr. C. M. Wenyon called attention to the present inadequacy of the facilities in London for the treatment and investigation of tropical diseases. In 1899 Manson founded at the London docks the School of Tropical Medicine and the Hospital for Tropical Diseases. This center functioned successfully until shortly after the war of 1914-1918, when it was removed to a more central position. Later the London School of Hygiene and Tropical Medicine was founded as a

gift from the Rockefeller Foundation. For the first time the School of Tropical Medicine was separated from the Hospital for Tropical Diseases. In the recent war the hospital was evacuated and subsequently was so damaged that it had to be abandoned. There is now, Dr. Wenyon pointed out, a great opportunity for establishing in London a Tropical Medical Center with a hospital of 300 beds and all facilities for teaching and research. The reestablishment in London of a Tropical Medical Center would also assist in improving the health of the natives of our colonies, although large sums of money have been designated for this purpose alone.

## BELGIUM

*(From Our Regular Correspondent)*

Feb. 4, 1946.

### The New Health Program

Dr. René Sand will publish through the Institute of Sociology an important work dealing with health conditions in Belgium and the necessary improvements. Advancement must include dissemination of practical knowledge of the rules of hygiene, an increase in the general well being and social security and the institution of certain measures such as the drainage of swampy regions, generalization of water distribution and drainage of lands as well as organizations of public health. The author is particularly concerned with the latter, which he believes should constitute an autonomous service independent of political influence. He foresees the creation of a national health service which would have among its assignments hygiene and all the branches of health service and the supervision of the professions and institutions of curative and preventive medicine. This service would include a national health council, regional health services, committees of coordination of communal and provincial health service and committees of coordination of public works and private institutions.

### Conditions of Malnutrition in Belgium During the German Occupation (1940-1944)

Professor Brull and his collaborators have published a series of studies on the results of malnutrition in Belgium during the war. The effects on the public health due to privations undergone during the occupation are not all known as yet and it will take years before they can be definitely established. There is, however, a collection of facts which it was advisable to study even during these sad years. Investigation has established the value of whole grain bread; studies on adults and adolescents have shown that there was a general loss of weight and a parallel lowering of arterial tension, but the hemoglobin was maintained at a normal level. Hypoproteinemia, hypocholesteremia and a low phospholipid content of the blood was almost constant in young persons. Valuable conclusions were reached on the pathogenesis of hunger edemas, the condition of the heart and circulation and nitrogen metabolism in malnutrition.

### Special Hospital for Poliomyelitis

The reappearance of infantile paralysis resulted in considerable confusion among the people. The information released by the Ministry of Public Health on this subject was of an alarming character. A special hospital was immediately designated by the Ministry of Public Health for the diagnosis and treatment of infantile paralysis. It must be recognized that by doing so the authorities evidenced unprecedented promptness. Dr. Leon Laruelle, president of the National League against Poliomyelitis and director of the Neurologic Center of Brussels, has specialized in the study of infantile paralysis. He was appointed to direct the activities required at such a time. The rapid shipment of four iron lungs was at once assured, thanks to the collaboration of the United States of America.

### Dangers of Artificial Respiration

In an article in the *Scalpel* Hustin directs attention to the dangers in certain procedures of artificial respiration, which by various mechanisms exert a harmful influence on the circulation of the blood. An apparatus which utilizes the insufflation of air into the lungs under pressure hinders more or less the entrance of blood into the thorax and interrupts the venous circulation. The author has observed in a case of syncope in the course of a spinal anesthesia that the hemorrhage of the wound stopped at the time the respirator was put into action, and this effect was produced more rapidly because the blood pressure had previously been much below normal. The supine position of the patient in the apparatus of Paris and the strap which surrounds the lower part of the thorax greatly disturb the circulation in the abdomen and the lower extremities; the inclined plane on which the thorax rests only accentuates the epigastric compression, as may the obesity of the subject. Thus, to the inconveniences of a purely respiratory nature pointed out by André and Boxus with the apparatus of Paris there are added other disadvantages of this apparatus for the circulation. In estimating the value of a method of artificial respiration, it is necessary to consider not only the entrance and exit of the pulmonary air but also whether the intrathoracic circulation is hindered by the means employed to insure pulmonary ventilation.

## MOSCOW

*(From Our Regular Correspondent)*

Jan. 1, 1946.

### Naval Medicine

During the recent war the Soviet navy was free from epidemics, although in preceding wars the loss of life from epidemics was higher than from combat. The mortality of seamen with various infectious diseases did not exceed prewar figures. These good results were due to various measures of control. Reinforcements for navy crews were temporarily quarantined from the regular personnel. Seamen returning from holidays, hospitals or leaves entered sanitary control stations for medical examination. At naval bases sanitary epidemiologic laboratories were established to inspect ships and coast troops, drinking water and food. They acted immediately to control infectious diseases. Antiepidemic measures were especially difficult to maintain on small war ships, which rapidly changed location and were often detached from bases for long periods. Mobile disinfection chambers, x-ray units, bath trains and laundry trains were utilized in the besieged seaports of Odessa, Leningrad, Sebastopol and certain arctic bases.

Battleships and cruisers carried experienced surgeons and adequate equipment so that surgical work could be performed on shipboard. But for personnel of smaller warships specialized medical and surgical work was performed in naval hospitals.

In order to provide medical care for the navy, spread over immense distances, "maneuver groups of strengthening" such as antiepidemic, surgical and transport groups were organized. A special system of closed evacuatory treatment provided for evacuation and complete medical service in naval hospitals.

As the result of treatment in the navy for the first forty-five months of the war 84.9 per cent of wounded and 96.4 per cent of diseased recovered and returned to service. These figures result from the excellent treatment and the work of numerous specialists, among them Prof. Julian Janelidze, the hero of Socialist Labor, and Professors Lisitzyn, Melnikov, Miasnikov, Punin and Yassinovsky. During the war an institution of flag specialists was organized. The members of this medical staff took direct part in the medical practice of the navy.

Much attention was given to the study of professional injuries in the navy, especially for divers and crews of cutters, submarines and the navy air fleet. Recommendations were made for improving hydroacoustics, air regeneration, rational food

supply and stimulation of the nervous system. The conditions were especially hard in the navy of the North Sea. Medical officers of submarines studied them directly while on ship board. Major Gusinsky of the medical corps worked out air regeneration tables for different types of submarines. He participated in eight campaigns.

The scientific and research medical work of the navy is planned by the scientific medical council of the medical sanitary administration of the navy and its sections. During the war eighteen volumes of transactions of the scientific medical council were published with about three hundred articles on different questions of naval medicine.

Special journals on naval medicine are issued, including the *Naval Military Surgeon, Military Medical Navy Transactions* and *Generalization of War Experience.* A great share of the credit for this work belongs to the director of the Navy Scientific Medical Institute, Professor Bykov, member of the Academy of Medical Sciences of the U. S. S. R., and to Professors Koiransky, Yakovenko, Podkopaiev and Frenkel as well as to the staff of the Naval Military Medical Academy.

## BRAZIL

*(From Our Regular Correspondent)*

Rio de Janeiro, Jan. 5, 1946.

### BCG Immunization of the Allergic Healthy Adult

Dr. Arlindo de Assis, head of the tuberculosis laboratory of the Ataulpho de Paiva Foundation, is conducting a series of experiments to ascertain the mechanism of BCG immunization in man. In a paper recently published he reports the effect, on the human organism allergic to tuberculin, of the prolonged use of massive doses of the BCG immunizing material. Two volunteers previously tested with old tuberculin reacted respectively to Pirquet's test and to Mantoux's test (1:1,000). X-ray films in 1 case showed residual lesions of the hilus lymph nodes as well as of the right apex (Simon's nodules). The second volunteer presented only residual x-ray lesions of hilus lymph nodes. Both of them began then to ingest daily increasing doses of BCG, starting from 4.5 mg. and reaching progressively 10, 15 and finally 30 mg. The daily use of BCG was continued for six months in 1 case and for five in the other, totaling respectively 2.095 and 2.358 Gm. In both cases the general health condition was quite normal during the immunization period and after it was discontinued. The leukocyte counts evidenced a very slight increase of lymphocytes. Blood sedimentation tests remained unaffected in 1 case and showed inconclusive variations in the second. X-ray films were taken both during the immunization period and four to six months after the BCG ingestion had ceased. Pathologic changes could not be discerned in the original pulmonary findings of the cases. Tuberculin tests were periodically performed, evidencing a slight degree of desensitization of the skin specific allergy as the result of the daily absorption of BCG by the oral route. A gradual increase of tuberculin hypersensitiveness was again observed some time after BCG was discontinued.

### Occurrence of Murine Virus of Choriomeningitis

In the examination of material from gray mice captured in Salvador, state of Bahia, Dr. Fulvio J. Alice has found a filtrable virus similar to the virus of choriomeningitis. In a preliminary paper Dr. Alice reported that a virus filtrable in Berkefeld W filters has been isolated from Bahia gray mice through peritoneal and intracerebral inoculation of guinea pigs. It has been possible to infect albino rats and mice, but rabbits and cats apparently are not susceptible. The blood serum of guinea pigs which recovered from the infection produced by inoculation of the strain under study contained antibodies capable of neutralizing the strain WE of the choriomeningitis virus. The inoculation of the WE strain could also neutralize, but only partially, the Bahia strain. Guinea pigs which recovered from the infection produced by inoculation of the SP4 strain were resistant to the reinoculation of the standard virus, which was lethal for apparently normal guinea pigs used as a control. In a new paper Dr. Alice confirms and enlarges on his previous findings. The virus isolated from gray mice on simultaneous intracranial and intraperitoneal inoculations into guinea pigs is filtrable in Berkefeld V, N and W filters. Guinea pig brain, liver, spleen and blood are infective to other guinea pigs through the cerebral, peritoneal, muscular, subcutaneous and intradermic routes. Rabbits, cats, dogs, pigeons and chickens apparently are not susceptible to cranial or muscular inoculation. The presence of the virus in chicken tissues nine days after the cranial inoculation was demonstrated, but tests to verify the maximum persistence of the virus were not performed. It was not possible to demonstrate the virus in guinea pigs and mice of the laboratory colony. Guinea pigs or mice resistant to an infective initial inoculation were not found. Fever and other symptoms developed in almost all of the inoculated animals. Cross immunity and neutralization tests proved that the SP4 strain is serologically similar or closely related to the standard strain of lymphocytic choriomeningitis virus (WE strain, Rivers-Scott).

### Personal

Dr. O. de Almeida e Silva has been appointed director of the Department of Hospitals of the city of Rio de Janeiro, succeeding Dr. J. Paes de Carvalho.

Dr. Joaquim Motta has been appointed director of the Department of Public Health of this city, succeeding Dr. R. de Almeida Magalhães.

Dr. William Coolidge, the scientist who introduced improvements in x-ray tubes, recently spent some time in Rio de Janeiro and São Paulo, where he was honored by the National Academy of Medicine, by the Brazilian Academy of Sciences, by the Brazilian Society of Radiology and by the universities of the two cities. Dr. Coolidge delivered several lectures on his research in radiology.

The Society of Forensic Medicine and Criminology of São Paulo awarded the Oscar Freire medal to Dr. Horacio M. Canellas, to Dr. José T. Bittencourt and to Dr. Sylvio Marone for remarkable scientific papers in the field of forensic medicine during 1945.

### Deaths

Col. Carlos Eugenio Guimarães of the Brazilian army medical corps, retired, died recently at the age of 64. Dr. Guimarães was a leading surgeon, founder of the Brazilian Red Cross and its president for several years.

## Marriages

Edward G. Davis Jr., Richmond, Va., to Miss Doris Davenport of Hampton in Corpus Christi, Texas, September 22.

John Pope Collins to Miss Dorothy Jean Watkins, both of Durham, N. C., at Zanesville, Ohio, January 1.

Joseph Lindsay Cook, Graham, N. C., to Miss Jean Foster Bailey of Greenwood, S. C., December 15.

Gerald Anderson Fostvedt, Harrison, N. J., to Dr. Lucille Marian Radke of Minneapolis, October 20.

Walter W. Hamburger Jr., Chicago, to Miss Ruth C. Kraft of Hackensack, N. J., January 7.

Irwin I. Lubowe, New York, to Miss Ruth C. Katz of Union City, N. J., in Boston, December 22.

Alfred B. Stich to Miss Muriel J. Edelstein, both of Washington, D. C., December 31.

Henry M. Stern to Miss Carol Goodman, both of Wilmington, N. C., January 18.

Leo Wilson to Miss Hilda Loveman, both of New York, December 29.

# Correspondence

## REACTION FOLLOWING BRONCHOGRAPHY WITH IODIZED OIL

*To the Editor:*—My comment on the article "Reaction Following Bronchography with Iodized Oil" by Capt. George S. Mahon (THE JOURNAL, January 26, p. 194) is prompted by my belief that he has misinterpreted the findings at hand. The proper interpretation of the accident would have prevented this death and should prevent further fatalities.

In his discussion Dr. Mahon correctly disregards the possibility of cocaine poisoning and of allergic shock from cocaine sensitivity because of the time elapsed between the administration of the drug and the onset of the symptoms. The same reasoning should also pertain to the question of a localized lipiodol sensitivity in the bronchi or of allergic shock from the instillation of lipiodol: an allergic reaction severe enough to be fatal would have taken place immediately or shortly after the instillation of the lipiodol. It would have been characterized by generalized edema in most areas of the system as well as in the shock organ itself (Waldbott, G. L.: Allergic Shock: III. From Substances Other Than Pollen and Serum, *Ann. Int. Med.* **7**:1308 [April] 1934).

Since the pathologic condition described was typical of death from allergic asthma and since death was due to obstruction of the bronchi by mucous plugs, the preexisting asthma and bronchiectasis should be held solely responsible. There was no indication whatever of "allergic sensitivity to some constituent of lipiodol, probably the iodine"!

In patients displaying a great deal of mucus in the bronchial tree, injections of such additional viscous material as lipiodol into the bronchi not infrequently induce obstruction of the small bronchi followed by atelectasis of lung tissue and pneumonitis or—as in this case—massive collapse of a lung when a main bronchus is involved. It is the result of too much "crowding" in the bronchi.

Two lessons may be learned from the experience of Dr. Mahon's case:

1. If an asthmatic patient has much mucus in the bronchial tree, a lipiodol injection should either be avoided or preceded by bronchoscopic aspiration of mucus.

2. When an accident of this kind occurs, the first measure should be the immediate insertion of a bronchoscope into the bronchi and the aspiration of the obstructing material. This was first proposed by me (Emergency Treatment in Asthma, THE JOURNAL, April 30, 1938, p. 1423) as *the* life-saving measure in asthma of extreme severity. In my own experience this has materially reduced the incidence of asthmatic death, regardless of whether the attack originated spontaneously or through the administration of some drug.

GEORGE L. WALDBOTT, M.D., Detroit.

## HOSPITAL STAFF MEETING

*To the Editor:*—The type of medical staff meeting that I describe here has proved of interest to other groups of doctors who have learned about it. After two years of use at Geneva Community Hospital it has proved to be successful beyond expectations. Although no originality is claimed for the idea behind the meeting, I conceived it for the first time for use at Geneva in January 1945.

A subject is selected from a group suggested by the staff, biliary tract disease, for example. This is divided into anatomy of the biliary tract, congenital deviations, etiology and pathology of disorders, medical and surgical diseases with diagnosis and management, one subject being assigned to each staff man until the entire subject is covered. Time is limited to ten minutes. After completion of presentations, questions are accepted from the floor for answering. They are listed by the secretary. Those left unanswered or those provocative of controversy are compiled.

An authority on the subject (most of our guests have been members of the faculties of medical schools in Chicago) is invited to be guest at a subsequent meeting. The questions are sent to him a week in advance. He comes prepared to offer answers or enter into the controversy. Much information is derived by all.

Illness has been about the only reason that has kept staff members or guests away from meetings.

The pleasure of the staff and the amazing attendance records prompt this report, with the idea that other hospitals might like it.

JAMES P. CAMPBELL, M.D., Wheaton, Ill.

## OPPORTUNITIES FOR PRACTICE IN CHINA

*To the Editor:*—I should like, as a medical missionary in China for thirty-eight years—soon to go back—to reinforce the letter of Drs. Hume and Forman published in THE JOURNAL, February 2. There are wonderful opportunities in China and the other mission fields for young men and women to put their lives where they will do most good and help to bring in the era of lasting peace. The life is stimulating, developing and deeply rewarding. Especially is this true of medical missionaries. After study of the language, which in the case of Chinese is fascinating in my opinion, the doctor, man or woman, is thrown into a busy hospital work with unlimited opportunities of development along any special line. Especially rewarding is the working with people of another race, getting to know and understand them and helping them to a more abundant life. It isn't always easy—one has to be a pioneer and build, improvise and perfect. But such a life should appeal to those who have a deep faith in God and in men and who want to make their lives count in this troubled world.

HARRY B. TAYLOR, M.D., Anking, China.

## MEDICAL NEEDS IN YUGOSLAVIA

*To the Editor:*—I have been informed that over a month ago the chief delegate of the Yugoslav Red Cross, Lieut. Col. Robert Neubauer, called on you and gave you a true picture about the health conditions existing in Yugoslavia today. According to authentic information there are over a million children afflicted with pulmonary tuberculosis, among whom are more than 12,000 cases of bone tuberculosis. The present relief campaign was organized by Americans under the honorary chairmanship of Mrs. Eleanor Roosevelt especially to ward off the starvation and famine of Yugoslav children. I wish also to inform you that there are more than six million Yugoslavs completely exhausted, undernourished and facing starvation because of widespread devastation and complete destruction of the country by Nazi-fascist invaders.

I am writing to you as an American citizen of Yugoslav descent (from Ljubljana-Slovenia) who knows intimately the country from historical, ethnical, economopolitical and linguistic-cultural points of view. It is imperative for our government to get correct, true and unbiased information about the new Yugoslav Republic if we want to avoid disturbing political storms that may confront us in the near future. A few days ago I received a letter from Dr. Božidar Lavrič, professor of surgery at Ljubljana University, who wrote:

"Our medical institutes need laboratory equipment of all kinds, and surgical instruments used in brain and neurosurgery and modern oral surgery. At present the most urgent need exists

for microscopes, analytic apparatus, cameras and projection apparatus employed in teaching the students. We would be extremely grateful if we could get a single apparatus for anesthesia with cyclopropane or nitrous oxide. In fact, our young medical faculty is the weakest in technical laboratory equipment; we still have enough of our own sanitary material, cotton and gauze and we are getting it also from UNRRA. We tried to obtain medical literature from America but we were unsuccessful. We need urgently special medical reviews and medical books that will enable us to replace those we lost during five years of occupation and war."

From the foregoing translation of a part of the letter of Dr. Božidar Lavrič you can easily see how thorough the Nazi-fascist invaders were in destroying universities, libraries and laboratories.

RUDOLPH P. ZALETEL, M.D.,
7105 Stony Island Avenue,
Chicago.

## RESTLESS LEGS

*To the Editor:*—The editorial on "Restless Legs" (THE JOURNAL, Nov. 24, 1945, p. 875) interested us deeply. You refer to a syndrome described by Axel Ekbom in which the most characteristic signs are paresthesias over the inner aspect of the legs which develop only when the legs are still and induce the patient to move the legs to get relief. The same syndrome was described by us in the *Confinia Neurologica* **3**:110, 1940 under the heading "Familiäres Auftreten von Pruritus, Urtikaria und parästhetischer Hyperkinese der unteren Extremitäten." We assumed that this syndrome may be due to a heredodegeneration of the nervous system. Since then we have observed another family instance in which the patient described his disease in a graphic way as "fidgets."

J. C. MUSSIO FOURNIER, M.D.
F. RAWAK, M.D.
Institute de Endocrinology,
Montevideo.

# Bureau of Investigation

## SOME MISCELLANEOUS MEDICAL FRAUDS

### A Variety of Schemes Debarred from the Mails

Fraud orders issued by the Post Office Department have frequently been the subject of extensive articles by the Bureau of Investigation in these pages of THE JOURNAL. Following are abstracts of two such orders:

**Cal-Indo (or Cal-Inda) Company.**—These were trade styles for a Los Angeles concern which sold through the mails something known as "Calindo [or Calinda] Tablets." The promoters represented that this was a competent, effective and curative treatment for constipation, high blood pressure, liver ailments, diabetes, neuritis, arthritis, rheumatism, intestinal disorders and so-called heart trouble, regardless of the age and physical condition of the user; that persons taking these products would receive benefits identical with, or similar to, those claimed by other users in testimonials appearing in the concern's sales literature; that the tablets contain minerals required by the system in the normal functioning of the human body, and that the continued use of the preparation, until all symptoms have disappeared, will restore the liver, kidneys, intestines, pancreas and spleen to a state of normal function. The Post Office Department declared these representations to be false and fraudulent, and cited the concern to show cause why it should not be debarred from the mails. One L. G. Dieker, designated as president of the firm, filed a written reply, denying any violation of the postal laws and any representation that his tablets were an effective treatment for the diseases mentioned. Nevertheless, the Post Office Department was able to cite many testimonials to the effect that the tablets had been effective for diabetes, neuritis, arthritis, asthma, high blood pressure, heart and liver troubles and intestinal disorders. At the hearing of the case a chemist of the Food and Drug Administration testified for the government that the Calindo (Calinda) Tablets (pink-coated) contained belladonna, ginger, podophyllin and cascarin. He testified further that the accompanying brown-coated tablets (exact name not reported) contained emodin-bearing material, licorice, leptandra, podophyllin, ginger, possibly anise, and acid-insoluble material used as a binder, which was probably talc. A Senior Medical Officer of the Food and Drug Administration testified for the government that, among other things, the total action of the drugs mentioned would be that of any irritant laxative, useful only as a means of relieving occasional or temporary constipation; that, scientifically considered, they would not be a proper treatment or cure for chronic constipation, and that certain types of this disorder would probably be made worse by this treatment. He further declared that the tablets contained no significant amount of minerals and therefore would be of no value in treating any condition resulting from a mineral deficiency. Again he showed that there is no scientific basis for a statement or belief that high blood pressure is in any way caused by constipation or relieved by laxative drugs. His testimony included a discussion of the causes and proper treatment of diabetes, rheumatism and heart and liver disorders, and showed the futility and even danger in treating such conditions with laxatives. As a result of the hearing, L. G. Dieker, the Cal-Indo Company and the Cal-Inda Company were, on Dec. 7, 1944, denied the use of the mails. In this connection it is worth noting that in the Calindo literature there was the claim "no man will ever know 'What Strange Secret' nature has locked in these wonderful herbs from the far away jungle country." This recalls the fact that in 1931 and for a few years afterward something called "Duryana" and claimed to be based on "jungle fruits" was being advertised by an L. G. Dieker of the Duryana Company, 402 Bradbury Building, Los Angeles. Earlier in 1931 it was reported that a "Dr. Dieker" having the same Los Angeles building and room address as above was agent for a "fruit gland food" known as "Lukutate." No record could be found of Dieker as a Doctor of Medicine or as any kind of "drugless healer." Lukutate, a nostrum from Germany, was dealt with at some length in this department of The Journal Jan. 25, 1930, page 281. A later name for it was "Dur-Inda," a discussion of which appeared in The Journal April 23, 1932, page 1493.

**Lee Products.**—Under this trade style one Milton L. Lieberman sold some fifteen nostrums by mail from his Chicago residence. He was said to claim to be a registered pharmacist and to have his own laboratory, "modestly equipped," at his home. Because of questionable claims made for three of his products, "Anti-Gray Hair Vitamin," "Lee's Rheumatic Pills" and "Lee's Special Pills," he was notified by the Post Office Department to show cause at a hearing in Washington why his business should not be debarred from the mails as a fraud. Among these claims were that the Anti-Gray Hair Vitamin, when used as directed, would restore the "natural youthful color" to gray hair of any person, regardless of age, or cause of discoloration, and that such restoration would be accomplished "within 24 to 30 days"; that Lee's Rheumatic Pills, when taken as directed, would provide the "desired relief" from "the tortures of pain" incidental to arthritis, neuritis and sciatica, regardless of the cause or duration thereof or the age or condition of the user, and that Lee's Special Pills, when used according to directions, would give "sure" relief to persons suffering from kidney and bladder ailments. Although Lee's attorney asked the Post Office Department for certain extensions of time, and finally for a disposition of the case by "agreement or stipulation," which was denied, neither he nor his client appeared at the hearing in Washington. On that occasion a qualified chemist testified for the government that his analysis did not disagree with the statement of ingredients given on the label of Anti-Gray Hair Vitamin, namely, that each tablet contained 10,000 micrograms of calcium pantothenate and 333 units of vitamin $B_1$, plus B complex from yeast; that Lee's Rheumatic Pills are actually gelatin capsules, each containing a white powder in which were found 7.2 grains of sodium salicylate, 1.13 grams of aspirin and 4.5 grains of sodium bicarbonate, whereas Lee's Special Pills were blue-coated tablets consisting of potassium nitrate, cascara, juniper berries and buchu. A Senior Medical Officer of the Food and Drug Administration testified for the government that the chief cause of gray hair is aging processes, though it may be caused by debilitating, systemic diseases, glandular disorders, heredity or nerve injury resulting from accidents. In some cases the grayness may be only temporary and the original color may return, especially in cases of younger persons whose health is restored after some sudden or acute condition which caused the gray hair. The witness further testified that there is no scientific medical evidence to show that calcium pantothenate, either separately or in combination with the other ingredients of the mixture in question, will restore natural color to gray hair. He cited the results of a scientific test in which he had participated and in which 27 persons with gray hair working in the same office were given daily dosage of 20 milligrams of calcium pantothenate for a period of six months, at the end of which time every one of them still had gray hair. Discussing Lee's Rheumatic Pills, the witness stated that rheumatism may arise from many causes and take various forms, and that since no single treatment would be adapted to all of these, the Lee nostrum would be an unscientific treatment for them. Lee's Special Pills he showed to be equally ineffective in their own field, that of kidney and bladder disorders. He declared that many serious diseases of these organs, and other ailments mistaken for them, cannot be cured by any home treatment, but rather, require scientific study and handling. The evidence presented was considered to confirm the charge, that of obtaining money through the mails by means of false and fraudulent pretenses, representations and promises, and on Dec. 1, 1944, a fraud order was issued to debar the Lee Products from further use of the mails. Meantime, another government agency, the Federal Trade Commission, also had objected to certain unwarranted claims made for "Lee's Periodic Pills" and "Lee's Periodic Capsules," put out for "feminine hygiene" by Milton L. Lieberman, trading as Lee Products and as Chemi-Culture Laboratories. As a result, the Commission announced on Dec. 5, 1943, that Lieberman had entered into a stipulation with the Commission, agreeing to discontinue these misrepresentations. The case was briefly reviewed in this department of The Journal Sept. 16, 1944, page 189. A later complaint brought by the Commission in September 1944 against Lieberman and his trade names and involving further unwarranted advertising representations for his "female weakness" nostrums has not yet been concluded.

# Bureau of Legal Medicine and Legislation

## MEDICOLEGAL ABSTRACTS

**Drunkenness: Results of Chemical Test of Blood Admissible in Evidence on Question of Intoxication.**—The plaintiff sued to recover damages for the death of her husband, which was alleged to have resulted from the defendant's negligent operation of a motor vehicle. From a judgment for the plaintiff, the defendant appealed to the Supreme Court of Oregon.

The defendant was a soldier stationed at Camp White, Oregon. At the trial Captain Porro, a medical officer at the camp hospital, was permitted to testify that he had made a chemical test of the defendant's blood after the accident and that it disclosed a sufficient quantity of alcohol to indicate intoxication. The defendant objected to the admission of such testimony on the ground that the presence of alcohol in the blood stream is no evidence of intoxication. We think, said the court, that, when intoxication is the issue, testimony by a qualified witness as to the result of a blood test has probative value and should be received. Continuing, the court said that the subject of blood and urine tests in this connection had been discussed in numerous published scientific treatises and that there is ample support for the following statement from the exhaustive article "The Medico-Legal Aspects of the Blood Test to Determine Intoxication" by Ladd and Gibson, 24 Iowa L. Rev. 190:

> The blood and urine test to determine intoxication has reached a stage of scientific development and reliability where it may serve a most useful purpose in assisting courts and juries to discover the truth in cases in which intoxication is an issue.

Another objection to the Captain's evidence was that the test offends against the rule that a witness will not be permitted to express an opinion on the merits of a case. The Supreme Court said that an expert witness, testifying as to the result of a blood test, may say that a given quantity of alcohol found in the blood of a particular individual indicates intoxication in a greater or less degree, but, since his testimony is based solely on the result of the blood test, he may not, of course, give his opinion that the individual in question was in fact intoxicated. In this particular, the testimony of Captain Porro was not objectionable. Furthermore, the competency of such testimony is not at all impaired because some persons yield more readily than others to the deleterious effects of intoxicants. That fact, concluded the court, may lessen the weight of the testimony, but it will not exclude it.

The judgment in favor of the plaintiff was reversed, however, because of the failure of the evidence to show that the blood which Captain Porro examined was in fact the blood of the defendant.—*Natwick v. Moyer et ux 163 P. (2d) 936 (Ore., 1945).*

**Medical Practice Acts: Osteopathic School Granted Discretion in Admission Requirements.**—Plaintiff, in the name of the People of the State of Illinois, filed a mandamus action to compel the defendant, Department of Registration and Education, to permit her to take an examination for a license to practice osteopathy. From a judgment denying the requested relief, the plaintiff appealed to the appellate court of Illinois.

Section 5, paragraph 2(b) of the medical practice act provides, in reference to the educational standards set up for osteopaths and other limited practitioners,

> . . . that such . . . college . . . at the time of his graduation required as a prerequisite to admission thereto a *four years' course* of instruction in a high school, and as a prerequisite to graduation therefrom a *four years' course* of instruction . . . of not less than *eight* months each, . . . the time elapsing between the beginning of the first year and ending of the fourth year . . . having been not less than thirty-six (36) months, . . . such high school and such . . . college . . . having been reputable and in good standing in the judgment of the department.

The defendant denied that the high school which the plaintiff attended was in good standing.

The plaintiff testified that, in order to qualify for admission to the Chicago College of Osteopathy, from which she graduated in June 1942, she had studied in a state chartered adult high school and under private tutelage to gain fifteen high school credits. In 1937 she took the University of Illinois examination in high school subjects and was admitted to the college in September of that year. When admitted, the results of the examination on only 12½ credits were known and to that extent she passed. Later she learned that she had passed only 2 of the remaining 2½ credits, having failed in physiography. When she was admitted to the college, the college assumed that she had passed the 15 credits, but, on learning of the final results of the examination, it consented to her continued study on condition that she make up the deficiency by examination. She failed in the physiography examination three times and then, with the consent of the college, abandoned that subject, studied organic chemistry at Lewis Institute in Chicago, passed the examination in that subject and subsequently graduated from the college.

In the oral argument before the appellate court, the defendant admitted that four years of high school was not required; it contended however that, since the plaintiff entered the college with less than 15 credits, the equivalent of a four years' high school, she was not qualified to take the examination for a license to practice osteopathy. The question, said the court, is whether the plaintiff should be disqualified because, when admitted to the college, she was deficient in credits.

The court noted that the medical practice act does not require 15 credits. There is no requirement under its provisions that plaintiff must have had a high school education. The requirement is that the college, at the time of the plaintiff's graduation, should require, as a prerequisite to admission, "a four years' course." It is a matter of common knowledge, said the court, that colleges and universities exercise a certain discretion in their admission requirements. Moreover, the tendency in judging educational attainments is strongly toward considerations of ability rather than records or credits. We believe, continued the court, that the discretion of the college extended to permitting the plaintiff to continue study on the condition that she make up ½ credit. Under the circumstances of this case, the court concluded, we think a grave injustice will be done if plaintiff is denied the writ of mandamus. Accordingly the judgment of the trial court was reversed and the cause was remanded with directions to enter a judgment for the plaintiff.—*People ex rel. Harmon v. Thompson, Director of Registration and Education, 63 N. E. (2d) 624 (Ill., 1945).*

# Medical Examinations and Licensure

## COMING EXAMINATIONS AND MEETINGS

### BOARDS OF MEDICAL EXAMINERS
### BOARDS OF EXAMINERS IN THE BASIC SCIENCES

Examinations of the boards of medical examiners and boards of examiners in the basic sciences were published in THE JOURNAL, Feb. 23, page 531.

### NATIONAL BOARD OF MEDICAL EXAMINERS

NATIONAL BOARD OF MEDICAL EXAMINERS: Part III. Various Centers, March. Exec. Sec., Mr. E. S. Elwood, 225 S. Fifteenth St., Philadelphia 2.

### EXAMINING BOARDS IN SPECIALTIES

AMERICAN BOARD OF ANESTHESIOLOGY: *Oral.* New York, Oct. 9-14. Sec., Dr. Paul M. Wood, 745 Fifth Ave., New York 22.

AMERICAN BOARD OF INTERNAL MEDICINE: *Oral.* Philadelphia, May 9-11. Final date for filing application is March 15. San Francisco, June 27-29. Final date for filing application is April 15. Asst. Sec., Dr. W. A. Werrell, 1 W. Main St., Madison 3, Wis.

AMERICAN BOARD OF OPHTHALMOLOGY: Chicago, Oct. 9-12. Sec., Dr. S. Judd Beach, 56 Ivie Rd., Cape Cottage, Me.

AMERICAN BOARD OF ORTHOPEDIC SURGERY: *Part I.* New Orleans, May 3-4, San Francisco and St. Louis, May 10-11 and Philadelphia, May 17-18. Final date for filing application is March 10. Sec., Dr. G. A. Caldwell, 3503 Prytania St., New Orleans 15.

AMERICAN BOARD OF OTOLARYNGOLOGY: Chicago, May 22-25. Sec., Dr. Dean M. Lierle, University Hospital, Iowa City, Ia.

AMERICAN BOARD OF PEDIATRICS: *Written.* Locally, March 22. *Oral.* Cleveland, April 27-28 and San Francisco, July 1-5. Sec., Dr. Lee F. Hill, 3309 Forest Ave., Des Moines, Ia.

AMERICAN BOARD OF RADIOLOGY: Chicago, Nov. 27 to Dec. 1. Final date for filing application is Sept. 1. Sec., Dr. B. R. Kirklin, Mayo Clinic, Rochester, Minn.

AMERICAN BOARD OF SURGERY: *Written, Part I.* Various centers, October. Final date for filing application is July 1. Sec., Dr. J. S. Rodman, 225 S. 15th St., Philadelphia 2.

AMERICAN BOARD OF UROLOGY: *Oral.* Chicago, February 1947. Final date for filing application is Nov. 15. Sec., Dr. Gilbert J. Thomas, 1409 Willow St., Minneapolis 4.

# POSTGRADUATE CONTINUATION COURSES FOR VETERAN AND CIVILIAN PHYSICIANS

**(Supplementary to listing published Dec. 8, 1945, Vol. 129, pp. 1046-1059).**

| Institution | Title of Course | Schedule of Course | Registration Fee and/or Tuition |
|---|---|---|---|
| **ALLERGY** | | | |
| University of Colorado School of Medicine, 4200 East Ninth Ave., Denver | Skin and Allergy | Arranged, 3 days | $20 |
| Cook County Graduate School of Medicine, 427 S. Honore St., Chicago | Personal Course in Allergy and Related Conditions | April 3-June 5, 1946, once weekly | 125 |
| University of Michigan Medical School, 1313 East Ann St., Ann Arbor, Mich. | Allergy | May 13-18, 1946 | Not stated |
| **ANATOMY** | | | |
| Cook County Graduate School of Medicine, 427 S. Honore St., Chicago | Surgical Anatomy on the Cadaver | April 3, 1946, 10 weeks once weekly | 125 |
| **ANESTHESIOLOGY** | | | |
| Ohio State University College of Medicine, 11th and Neil Aves., Columbus, Ohio<br>At: University Hospital | Anesthesiology | Arranged, at least 3 months | |
| **ARTHRITIS** | | | |
| University of Colorado School of Medicine, 4200 East Ninth Ave., Denver | Arthritides including Rheumatic Fever | Arranged, 3 days | 20 |
| **CHEST DISEASES** | | | |
| University of Colorado School of Medicine, 4200 East Ninth Ave., Denver<br>At: National Jewish Hospital | Diseases of the Chest | Arranged, 3 days | 20 |
| Cook County Graduate School of Medicine, 427 S. Honore St., Chicago | Technic of Physical Examination and Diagnosis of Chest | April 5, 1946, 8 weeks once weekly | 60 |
| New York State Dept. of Health, Alfred E. Smith State Office Bldg., Albany, N. Y.<br>At: Various state tuberculosis hospitals | Course of Instruction in Pulmonary Disease and Tuberculosis | Arranged, 3 to 12 months | |
| **CARDIOVASCULAR DISEASE** | | | |
| University of Colorado School of Medicine, 4200 East Ninth Ave., Denver | Cardiovascular Diseases (Including Peripheral Vascular Diseases) | Arranged, 4 days | 25 |
| **DIABETES** | | | |
| Harvard University Medical School Courses for Graduates, 25 Shattuck St., Boston | Diabetes Mellitus in Relation to General Medicine | Scheduled April 1-3, 1946; postponed to April 22-24, 1946 | 20 |
| **ENDOCRINOLOGY** | | | |
| University of Colorado School of Medicine, 4200 East Ninth Ave., Denver | Endocrine Diseases | Arranged, 2 days | 15 |
| **FRACTURES** | | | |
| Cook County Graduate School of Medicine, 427 S. Honore St., Chicago | Special Course in Fractures | March 20, 1946, 10 weeks once weekly | 125 |
| **GASTROENTEROLOGY** | | | |
| University of Colorado School of Medicine, 4200 East Ninth Ave., Denver | Gastro-Intestinal Diseases | Arranged, 3 days | 20 |
| University of Michigan Medical School, 1313 East Ann St., Ann Arbor, Mich. | Gastroenterology | June 17-21, 1946 | Not stated |
| **HEMATOLOGY** | | | |
| University of Colorado School of Medicine, 4200 East Ninth Ave., Denver | Blood Diseases | Arranged, 3 days | 20 |
| Cook County Graduate School of Medicine, 427 S. Honore St., Chicago | Course in Hematology | April 3, 1946, 10 weeks once weekly | 100 |
| University of Michigan Medical School, 1313 East Ann St., Ann Arbor, Mich. | Diseases of the Blood | June 3-8, 1946 | Not stated |
| **INDUSTRIAL HEALTH** | | | |
| Wayne University School of Occupational Health, 1516 St. Antoine St., Detroit | Occupational Health and Medicine | March 4, 1946, 12 weeks (postponed because of labor conditions) | Not stated |
| **MEDICINE, GENERAL** | | | |
| Cook County Graduate School of Medicine, 427 S. Honore St., Chicago | Course in Heart Disease and Electrocardiography | April 3-June 19, 1946, 10 weeks once weekly | 125 |
| University of Kansas School of Medicine, 39th St. and Rainbow Blvd., Kansas City, Kan. | Internal Medicine, Psychiatry, Dermatology | March 25-29, 1946 | Not stated |
| Kentucky Medical Association, Louisville, Ky.<br>At: Louisville General Hospital | Refresher Course in Internal Medicine | 6 weeks, given continuously | None |
| University of Maryland School of Medicine, Lombard and Green Sts., Baltimore | General Medicine, including Medicine, Surgery, Pediatrics, Obstetrics and Gynecology | April 15-June 8, 1946, 8 weeks | 100 |
| Boston University School of Medicine, 80 E. Concord St., Boston | Internal Medicine | March 15, 1946, 6 months | 375 |
| Beth Israel Hospital, 330 Brookline Ave., Boston | Postgraduate Course in Internal Medicine | 1 academic year | Not stated |

| Institution | Title of Course | Schedule of Course | Registration Fee and/or Tuition |
|---|---|---|---|
| **MEDICINE, GENERAL—Continued** | | | |
| St. Louis University School of Medicine, 1402 S. Grand Blvd., St. Louis | Aspects of the Medical and Surgical Specialties in General practice | May 13-June 8, 1946 | $62.50 G. I. Bill of Rights |
| | General Refresher Courses in Medicine and Surgery | March 15-May 11, 1946 | Each course 125 |
| Cornell University Medical College, 1300 York Ave., New York At: Bellevue Hospital | Graduate Course in Internal Medicine | April 1, 1946 | 6 months 250<br>2 weeks 50 |
| University of Pittsburgh School of Medicine, Bigelow Blvd., Pittsburgh | Refresher Course for General Practitioners | 8 weeks tentatively scheduled for April 1, 1946 | 150 |
| **NEUROLOGY and PSYCHIATRY** | | | |
| Cook County Graduate School of Medicine, 427 S. Honore St., Chicago | Neurology for the General Practitioner | April 3, 1946, 10 weeks once weekly | 80 |
| University of Colorado School of Medicine, 4200 East Ninth Ave., Denver | Neurology and Psychiatry | Arranged, 3 days | 20 |
| **OBSTETRICS and GYNECOLOGY** | | | |
| University of Colorado School of Medicine, 4200 East Ninth Ave., Denver | Gynecology | Arranged, 1½ days | 15 |
| | Obstetrics | Arranged, 2½ days | 20 |
| Cook County Graduate School of Medicine, 427 S. Honore St., Chicago | Practical and Didactic Course in Office Gynecology | March 13, May 8, July 10, Aug. 28, Oct. 9, Nov. 20, 4 weeks once weekly | 80 |
| | Personal Course in Gynecological Surgery | March 14, May 9, July 11, Aug. 29, Oct. 10, Nov. 21, 4 weeks once weekly | 80 |
| University of Kansas School of Medicine, 39th St. and Rainbow Blvd., Kansas City, Kan. | Obstetrics and Gynecology | June 17-21, 1946 | Not stated |
| Boston University School of Medicine, 80 E. Concord St., Boston | Obstetrics and Gynecology | March 15, 1946, 6 months | 375 |
| St. Louis University School of Medicine, 1402 S. Grand Blvd., St. Louis | Gynecology and Obstetrics | April 15-May 11, 1946 4 weeks | 62.50 G. I. Bill of Rights |
| **OPHTHALMOLOGY** | | | |
| The Ophthalmalogical Study Council, 520 Commonwealth Ave., Boston | Intensive Course on the Basic Subjects of Ophthalmology | April 1-June 1, 1946 | 2 months 200<br>1 month 110 |
| Washington University School of Medicine, Euclid Ave. and Kingshighway, St. Louis | Refresher Course in Ophthalmology | June 3-29, 1946 | 200 |
| **ORTHOPEDIC SURGERY** | | | |
| University of Colorado School of Medicine, 4200 East Ninth Ave., Denver | Orthopedics | Arranged, 3 days | 20 |
| Boston University School of Medicine, 80 E. Concord St., Boston | Orthopedic Surgery | March 15, 1946, 6 months | 375 |
| **OTOLOGY** | | | |
| Harvard Medical School Courses for Graduates, 25 Shattuck St., Boston | All Day Course in Otology | April 1-30, 1946 | 185 |
| **OTORHINOLARYNGOLOGY** | | | |
| University of Kansas School of Medicine, 39th St. and Rainbow Blvd., Kansas City, Kan. | Eye, Ear, Nose and Throat | April 15-19, 1946 | Not stated |
| Boston University School of Medicine, 80 E. Concord St., Boston | Ear, Nose and Throat | March 15, 1946, 6 months | 375 |
| Manhattan General Hospital, New York City | Clinical and Laboratory Course in Rhinoplasty | March 18-April 18, 1946 | Not stated |
| **PEDIATRICS** | | | |
| University of Colorado School of Medicine, 4200 East Ninth Ave., Denver | Pediatrics | Arranged, 3 days | 20 |
| St. Louis University School of Medicine, 1402 S. Grand Blvd., St. Louis | Pediatrics | May 13-June 8, 1946 | 62.50 G. I. Bill of Rights |
| New York Postgrad. Medical School, Columbia University, 303 E. 20th St., New York | Clinical Pediatrics | April 8-May 4<br>May 6-June 4, 1946 | 125 |
| Washington State Medical Association, Seattle, Wash. At: Children's Orthopedic Hospital | Refresher Course in Pediatrics | Every month, 4 weeks | 15 |
| **PSYCHOSOMATIC MEDICINE** | | | |
| Temple University School of Medicine, 3400 N. Broad St., Philadelphia | PG Course in Psychosomatic Medicine for the Internist and General Practitioner | March 4-30, 1946 | 200 |
| **RADIOLOGY** | | | |
| Boston University School of Medicine, 80 E. Concord St., Boston | X-Ray | March 15, 1946, 6 months | 375 |
| **SURGERY** | | | |
| University of Colorado School of Medicine, 4200 East Ninth Ave., Denver | Surgery in General Practice | Arranged, 3 days | 20 |
| | Surgery of the Gastro-Intestinal Tract | Arranged, 3 days | 20 |
| | Surgery of the Head, Neck and Chest | Arranged, 3 days | 20 |
| Cook County Graduate School of Medicine, 427 S. Honore St., Chicago | Surgical Diagnosis, Postoperative and Preoperative Care | April 3, 1946, 10 weeks once weekly | 100 |
| University of Kansas School of Medicine, 39th St. and Rainbow Blvd., Kansas City, Kan. | General Surgery and Radiology | May 13-17, 1946 | Not stated |
| Boston University School of Medicine, 80 E. Concord St., Boston | General Surgery | March 15, 1946, 6 months | 375 |
| **UROLOGY** | | | |
| University of Colorado School of Medicine, 4200 East Ninth Ave., Denver | Urology | Arranged, 3 days | 20 |
| Boston University School of Medicine, 80 E. Concord St., Boston | Urology | March 15, 1946 | 375 |
| **VENEREAL DISEASE** | | | |
| University of Colorado School of Medicine, 4200 East Ninth Ave., Denver | Communicable Diseases, Venereal Disease | Arranged, 4 days | 25 |

# Current Medical Literature

## AMERICAN

The Association library lends periodicals to members of the Association and to individual subscribers in continental United States and Canada for a period of three days. Three journals may be borrowed at a time. Periodicals are available from 1936 to date. Requests for issues of earlier date cannot be filled. Requests should be accompanied by stamps to cover postage (6 cents if one and 18 cents if three periodicals are requested). Periodicals published by the American Medical Association are not available for lending but can be supplied on purchase order. Reprints as a rule are the property of authors and can be obtained for permanent possession only from them.

Titles marked with an asterisk (*) are abstracted below.

### Alabama State Medical Assn. Journal, Montgomery

**15**:149-176 (Nov.) 1945

Thiouracil in Hyperthyroidism. E. Drennen.—p. 149.
Marion Sims and Other Nineteenth Century Pioneers: The Dawn of Scientific Medicine and Surgery. S. Harris.—p. 152.
Alabama Doctor. W. H. Brantley.—p. 159.

**15**:177-200 (Dec.) 1945

Choice of Anesthetic. A. Habeeb and H. R. Elliott.—p. 177.
Electrocardiogram: History and Clinical Application. E. H. Planck. —p. 181.
Enuresis. J. U. Reaves.—p. 183.
Marion Sims and Other Nineteenth Century Pioneers: Dawn of Scientific Medicine and Surgery. S. Harris.—p. 185.
Underlying Causes of Alabama's Health Problems. M. S. Davie.—p. 192.

### American Heart Journal, St. Louis

**30**:321-426 (Oct.) 1945

*Traumatic Rupture of Normal Aorta in Young Adults: Report of 2 Cases. J. B. McDonald and W. A. Campbell.—p. 321.
Etiology and Pathogenesis of Neurocirculatory Asthenia: II. Mechanisms Underlying Giddiness Found in Patients with Neurocirculatory Asthenia. M. Friedman.—p. 325.
Further Evidence for Purely Valvular Origin of First and Third Heart Sounds. W. Dock.—p. 332.
Intravenous Administration of Lanatoside C to Patients Taking Maintenance Doses of Folia Digitalis up to Date of Hospitalization with Recurrent Congestive Heart Failure. T. Ray and J. S. LaDue. —p. 335.
Differentiation of Normal from Abnormal Q Waves. E. Goldberger. —p. 341.
Determination of Circulation Time: Unsuitability of Papaverine. L. Berk and N. Sapeika.—p. 365.
Electrocardiographic Features of Myocardial Infarction as Affected by Involvement of Septum and Complete and Incomplete Transmural Involvement. H. E. B. Pardee and M. Goldenberg.—p. 367.
*Transient 0 Diastolic Brachial Pressure (Indirect) Associated with Normal or Elevated Popliteal Pressure, Tachycardia and Nervous Tension. M. Wilburne.—p. 381.
New Form of Generalized Arterial Disease in Negroes: Report of 2 Cases. W. M. Yater and J. T. Roberts.—p. 390.
Evaluation of Vascular Reserve in Peripheral Vascular Disease. G. Saland and B. Calef.—p. 398.

**Traumatic Rupture of Normal Aorta.**—McDonald and Campbell report histories of 2 young men aged 32 and 24 respectively in whom the normal aorta had ruptured. Both ruptures occurred as the result of an automobile accident. An element produced by torsion of the head and trunk was probably an important factor in rupturing the vessel. The site of the rupture was distal to the emergence of the major branches of the aorta, which is the relatively mobile point of the thoracic aorta. A sudden blow displacing the thoracic structures might cause a rupture in this mobile section either by direct or by contrecoup force. In both patients there was a fracture of a few ribs but displacement of only one, on the right side. In the absence of abnormalities on macroscopic and microscopic study of the aorta it is clear that complete transection of all the coats of the aorta owing to trauma in these 2 young adults is in striking contrast to spontaneous rupture of the aorta resulting from a process described by Erdheim as medionecrosis aortae idiopathica. Measures directed at combating shock and supporting the circulation are fruitless.

**Transient 0 Diastolic Brachial Pressure.**—Wilburne observed in the course of routine examinations of men for induction into the armed forces a hitherto undescribed cardiovascular syndrome in examinees exhibiting great nervous tension. In addition to the nervous element the syndrome was characterized by transient 0 diastolic brachial pressure (indirect method), normal or elevated popliteal pressure and tachycardia. At first it was thought that perhaps these were cases of functional aortic insufficiency; consequently blood pressure readings were recorded in the lower extremities. The brachial systolic pressure associated with the 0 diastolic tension ranged from 118 to 250 mm. of mercury and averaged 159.1. The popliteal systolic and diastolic pressures in the prone position averaged 202.3 and 101.9 respectively. In the standing position the popliteal pressures were considerably higher. The heart rate ranged from 90 to 168 and averaged 127.4. Following rest periods varying between five and ninety minutes the diastolic pressure rose to values ranging from 60 to 112, exhibiting an average level of 75.2. The brachial systolic pressure revealed an average fall of 11 from the initial levels. The popliteal systolic pressure in the prone posture exhibited an average drop of 12.5. The popliteal diastolic pressure showed an average drop of 7.1. (The popliteal blood pressure in the standing position exhibited a corresponding reduction.) After resting the heart rate ranged from 76 to 148 and averaged 104.7, representing a fall of 22.7 beats per minute. These cases do not represent functional aortic insufficiency, because an aortic diastolic murmur was absent and a brachial diastolic pressure of 0 is generally not encountered in functional aortic insufficiency. Evidence of left ventricular dilatation was not found, and the diastolic pressure in the lower extremities did not show a corresponding change.

### American Journal of Clinical Pathology, Baltimore

**15**:353-418 (Sept.) 1945

*Changes in Tissues of Children Deprived of Dietary Protein. M. Fallas Diaz and A. Nettleship.—p. 353.
Studies on Relation of Pneumotropic Streptococci to Influenza Virus. E. C. Rosenow.—p. 362.
Development of Hemolytic Anemia During Sulfa Medication. M. Rachmilewitz and D. Hermoni.—p. 381.
Myeloid Leukemia, Probably Eosinophilic in Character. J. R. Hodgson, D. H. Kaump, G. Steiner and J. Bovill.—p. 389.
Weltmann Reaction in Arthritis. C. L. Steinberg and F. W. Lowenstein.—p. 395.
Pernicious Anemia and Miliary Tuberculosis of Bone Marrow Organ. E. M. Schleicher.—p. 402.
Heredity of Agglutinogen Rh. P. Moureau.—p. 405.
Tissue Changes Induced by Senecio Riddellii. I. Rosenfeld and O. A. Beath.—p. 407.

**Tissue Changes in Protein Deprivation.**—Fallas Diaz and Nettleship did postmortem examinations on children who died of dietary protein deficiency. There was a moderate to severe emaciation, with universal edema and anemia. Microscopically there is loss of cell cytoplasm and nuclear condensation with a noninflammatory edema, intracellular and interstitial. There is a loss of cells from the adrenal medulla with fibrosis, and cloudy swelling of the kidney with tubular cell loss. There is severe, widespread, irregular fatty infiltrations of the liver with, in some instances, flecks of acute necrosis.

### American Journal of Diseases of Children, Chicago

**70**:135-200 (Sept.) 1945

Human Milk Studies: XIX. Implications of Breast Feeding and Their Investigation. Icie G. Macy, H. H. Williams, J. P. Pratt and B. M. Hamil.—p. 135.
Id.: XX. Diet of Lactating Women and Collection and Preparation of Food and Human Milk for Analysis. Mildred Kaucher, Elsie Z. Moyer, A. J. Richards, H. H. Williams, Annie L. Wertz and Icie G. Macy.—p. 142.
Id.: XXI. Simple Technic for Manual Expression of Mother's Milk. Velma Davies.—p. 148.
Id.: XXII. Nicotinic Acid, Pantothenic Acid and Biotin Contents of Colostrum and Mature Human Milk. Margaret N. Coryell, Mary E. Harris, S. Miller, H. H. Williams and Icie G. Macy.—p. 150.
Id.: XXIII. Free and Total Thiamine Contents of Colostrum and Mature Human Milk. Charlotte E. Roderuck, H. H. Williams and Icie G. Macy.—p. 162.
Id.: XXIV. Free and Total Riboflavin Contents of Colostrum and Mature Human Milk. Charlotte E. Roderuck, Margaret N. Coryell, H. H. Williams and Icie G. Macy.—p. 171.
Id.: XXV. Ascorbic Acid and Dehydroascorbic Acid in Colostrum and Mature Human Milk. Bertha Munks, A. Robinson, H. H. Williams and Icie G. Macy.—p. 176.
Id.: XXVI. Vitamin A and Carotenoid Contents of Colostrum and Mature Human Milk. Marjorie Lesher, J. K. Brody, H. H. Williams and Icie G. Macy.—p. 182.
Id.: XXVII. Comparative Values of Bovine and Human Milks in Infant Feeding. J. M. Lawrence, B. L. Herrington and L. A. Maynard. —p. 193.

## American Journal of Hygiene, Baltimore

**42**:225-332 (Nov.) 1945

Study of Shigella by Means of Bacteriophage. L. F. Thomen and M. Frobisher Jr.—p. 225.

*Surveys of Nutrition of Populations: 5. Vitamin C Nutrition of a Rural Population in Middle Tennessee. J. B. Youmans, E. W. Patton, W. R. Sutton, Ruth Kern and Ruth Steinkamp.—p. 254.

Survey of Intestinal Parasites in Natives of Dutch New Guinea. R. B. Burrows.—p. 262.

Question of Transmission of Poliomyelitis to Rhesus Monkeys by Accidental Laboratory Infection. H. A. Howe and D. Bodin.—p. 266.

Evaluation of Various Measures of Anopheles Larva Density. P. F. Russell, T. R. Rao and P. Putnam.—p. 274.

Epidemiologic Studies of Encephalitis in San Joaquin Valley of California, 1943, with Isolation of Viruses from Mosquitoes. W. McD. Hammon, W. C. Reeves and P. Galindo.—p. 299.

Immunization Against Influenza with Observations During an Epidemic of Influenza A One Year After Vaccination. J. E. Salk, H. E. Pearson, P. N. Brown, C. J. Smyth and T. Francis Jr.—p. 307.

Studies of Plasmodium Gallinaceum Brumpt: III. Incidence and Course of Infection in Young Chicks Following the Subcutaneous Inoculation of Pooled Sporozoites. G. R. Coatney, W. C. Cooper and Helen L. Trembley.—p. 323.

**Vitamin C Nutrition of Rural Population in Tennessee.**—Youmans and his associates assessed the nutrition of a rural population in Middle Tennessee with respect to vitamin C by a study of the diet, the medical history and physical examination and determination of the concentration of vitamin C in the blood. Records of the dietary intake suggest that many people apparently can subsist on amounts of vitamin C at present believed to be inadequate without developing symptoms of ascorbic acid deficiency. The history and examination did not disclose scurvy and only infrequently revealed clinical evidence of a deficiency. Gingivitis, perhaps the best sign of minor deficiency, was found in a considerable proportion of the adults, and while statistical analysis of the data suggests the influence of other factors, there is also an indication of relation to the lack of vitamin C. X-ray examinations revealed only 1 instance of bone changes indicative of mild scurvy. With the paucity of reliable physical evidence of deficiency of vitamin C, the evaluation of the nutrition of the population in respect to this factor rests mainly on the concentration of vitamin C in the blood. Every subject tested showed some vitamin C in the blood, and only 10 had a concentration less than 0.1 mg. per hundred cubic centimeters. Whether a conclusion about the vitamin C nutrition is to be based on the evidence obtained will depend on the concentration which is designated as "abnormally low" and the significance to be attached to the concentration of ascorbic acid in the blood as an index of this nutrition. If it is assumed that concentrations below 0.3 mg. per hundred cubic centimeters represent a subnormal state of vitamin C nutrition, then by this standard about 92 subjects (8.6 per cent) of those examined were deficient.

## Annals of Internal Medicine, Lancaster, Pa.

**23**:711-914 (Nov.) 1945

*Azotemia in Typhus Fever. A. Yeomans, J. C. Snyder, E. S. Murray, R. S. Ecke and C. J. D. Zarafonetis.—p. 711.

Observations on Treatment of Graves' Disease with Thiouracil. D. P. Barr and E. Shorr.—p. 754.

Hyperophthalmopathic Graves' Disease. J. H. Means.—p. 779.

Effects of Thiouracil on Thyroid Gland. J. W. Shirer and M. Cohen.—p. 790.

Treatment of Postpneumonic Thoracic Empyema with Sulfonamides, Penicillin and Repeated Thoracenteses. A. I. Josey, J. W. Trenis and W. F. Kammer.—p. 800.

Early Diagnosis of Filariasis and Certain Suggestions Relative to Cause of Symptoms. W. E. Leede and A. I. Josey.—p. 816.

*Studies of Filariasis in Soldiers Evacuated from South Pacific. A. A. Goodman, E. M. Weinberger, Stuart W. Lippincott, A. Marble and W. H. Wright.—p. 823.

The Unusual in Gastrointestinal Roentgenology. G. M. Tice.—p. 837.

Acute Infectious Polyneuritis (Guillain-Barré Type). J. G. Chusid and G. H. Marquardt.—p. 852.

**Azotemia in Typhus.**—Yeomans and his associates report observations made in 1943 and 1944. The data were obtained from 64 patients in the United States of America Typhus Commission ward and 14 patients in the general wards of the Cairo Fever Hospital. Azotemia in epidemic louse borne typhus was found to occur frequently (in more than half of the cases), as indicated by elevated concentrations of blood nonprotein nitrogen, urea nitrogen and creatinine. The correlation between clinical severity and azotemia was striking. Elevated concentrations of blood nonprotein nitrogen were found in every fatal case in which the blood was examined. Azotemia appeared to be closely associated with excessive destruction of body protein and increased nitrogen excretion, with dehydration and a reduced output of urine in the presence of normal kidney function, and in severe cases with a sudden rapid fall in blood pressure associated with evidences of renal insufficiency. The appearance of renal insufficiency as a complicating condition in the disease was in nearly every instance the earliest indication that the patient's course would be severe or would end fatally.

**Filariasis in Solders Evacuated from the South Pacific.**—Soldiers, sailors and marines have been evacuated to the continental United States from various islands in the South Pacific Area because of suspected filariasis. Goodman and his co-workers report observations on 145 of these men studied at Harmon General Hospital. Signs and symptoms suggestive of filariasis (including lymphadenopathy, lymphangitis, scrotal edema, funiculitis, orchitis and varicocele) appeared on the average after about thirteen months' residence in an endemic area. The symptoms were mild, and only 6 patients experienced bouts of acute lymphangitis during the period of study in the United States. Elephantiasis or chyluria was not encountered. Microfilariae were demonstrated in the blood on one occasion in each of 4 patients (in 2 of these at oversea hospitals). Microscopic examination of excised lymph nodes in 19 cases showed only a nonspecific inflammatory response. Adult worms or remains of worms were not seen. Direct intracutaneous tests using antigens of Dirofilaria immitis and Setaria equina in 1:8,000 dilution gave positive responses in 54 per cent of cases, as compared with 6 per cent in control subjects. Of 75 patients tested with a 1:2,000 dilution of Litomosoides carinii, 46 per cent gave positive reactions. Positive complement fixation tests were found in 95 of 143 patients studied. However, the complement fixation technic used cannot be considered wholly specific, since 16 to 25 per cent of normal control subjects gave positive tests. There was agreement between the results of the complement fixation tests and the direct intracutaneous tests with S. equina and D. immitis in 66 and 71 per cent of patients respectively. Therapy included a liberal diet, "reconditioning" by means of gradually increasing activity and psychotherapy to allay fears as to possible future complications of the disease. The outlook for the men is considered good because of the relatively short residence in the endemic area and the slight degree of infection.

## Archives of Dermatology and Syphilology, Chicago

**52**:221-300 (Oct.) 1945

New Cutaneous Syndrome Occurring in New Guinea and Adjacent Islands: Preliminary Report. T. W. Nisbet.—p. 221.

Clinical Investigation of New Cutaneous Entity. C. L. Schmitt, O. Alpins and G. Chambers.—p. 226.

*Beta Dimethylaminoethyl Benzhydryl Ether Hydrochloride (Benadryl) in Treatment of Urticaria. A. C. Curtis and B. B. Owens.—p. 239.

*Use of Benadryl for Urticaria and Related Dermatoses: Preliminary Report. L. W. Shaffer, L. Carrick and H. S. Zackheim.—p. 243.

Penicillin Ointment: Studies on Stability Relative to Potency and on Sensitivity of Human Skin to Patch Tests with Ointment. R. B. Coomber.—p. 246.

Diseases of Skin Among Natives of Northeast New Guinea. W. D. Wolfe.—p. 247.

Sensitivity of Tuberculin Patch Test (Vollmer-Lederle): Results with 318 Persons Presenting Various Dermatoses. K. Loewenthal.—p. 249.

Effect of Feeding Lipotropic Substance to Patients with Xanthelasma. A. C. Curtis and J. P. Berger.—p. 252.

Relation of Ultraviolet Induced Mutations to Speciation in Dermatophytes. C. W. Emmons and A. Hollaender.—p. 257.

Contact Dermatitis of Eyelids Caused by Antioxidant in Rubber Fillers of Eyelash Curlers: Report of 7 Cases. G. H. Curtis.—p. 262.

Scrotal Tongue and Its Inheritance. N. Tobias.—p. 266.

**Benadryl in Urticaria.**—Benadryl (beta dimethylaminoethyl benzhydryl ether hydrochloride) is a member of a new group of pharmacologically active antihistamine drugs. Curtis and Owens administered it in amounts of 50 to 100 mg. orally one to five times daily to a diverse group of 18 patients with both acute and chronic urticaria. Eleven patients experienced prompt relief of symptoms as long as the drug was taken. Three had definite and real improvement, and many of the wheals which did appear were not pruritic. Four patients were not benefited. The drug has a wide margin of safety. The only toxic manifestations noted were drowsiness and muscular aching (2 cases),

dizziness, weakness and vertigo (1 case). Cumulative toxic symptoms were not noted in patients who ingested the drug as long as six or seven months. All toxic symptoms promptly disappeared when the drug was discontinued. The effect is palliative, and in many patients the urticaria recurred when the administration of the drug was discontinued. Since an antihistamine drug seems to be effective in controlling urticaria, it may be assumed that this is further indirect evidence that histamine is a factor in the production of urticaria.

**Benadryl for Urticaria and Related Dermatoses.**—Shaffer and his co-workers describe 8 cases of urticaria in 7 of which benadryl controlled the pruritus and caused the involution of the urticarial lesions in a fairly short period. The authors suggest that it may prove effective in the palliative relief of urticaria. In acute cases such palliation may be all that is required for their management. In cases of chronic urticaria it might offer valuable relief until investigation reveals the cause and adequate control measures can be carried out. Compared to the neurovascular stimulating action of epinephrine and ephedrine, benadryl apparently does not produce untoward effects, especially on the blood pressure, and in some instances it had a sedative action. Two cases of neurodermatitis, 1 of dyshidrotic eczema, 1 of atopic eczema and 1 of chronic lichen urticatus are hardly sufficient to appraise the value of benadryl for these diseases. However, the limited experience would suggest that it is not of value for neurodermatitis or dyshidrotic eczema. Results obtained by its use for atopic eczema and lichen urticatus warrant further trial.

## Archives of Ophthalmology, Chicago

**34**:271-356 (Oct.) 1945

Effect of Local Anesthetics on Cell Division and Migration Following Thermal Burns of Cornea. G. K. Smelser and V. Ozanics.—p. 271.
Standard Illuminants in Relation to Color-Testing Procedures. Le G. H. Hardy.—p. 278.
*Senile Hyaline Scleral Plaques. K. L. Roper.—p. 283.
Traumatic Iridodialysis: Its Surgical Correction: Report of a Case. A. Barlow and H. L. Weiner.—p. 292.
Tests for Detection and Analysis of Color Blindness: I. An Evaluation of Ishihara Test. Le G. H. Hardy, Gertrude Rand and M. Catherine Rittler.—p. 295.
Stereoscopic Sensitivity in Space Eikonometer. K. N. Ogle and V. J. Ellerbrock.—p. 303.
Clinical Differentiation of Emboli in Retinal Arteries from Endarteritis. A. J. Bedell.—p. 311.
Unusual Case of Hodgkin's Disease: Second Report. J. W. Avery and J. W. Warren.—p. 318.
Retinal Vascular Micrometry and Essential Hypertension. F. L. Koch.—p. 321.

**Senile Hyaline Scleral Plaques.**—Roper describes 5 cases of senile hyaline scleral plaques; 2 of the patients were 72, 1 was 78 and the other 2 were over 80 years of age. Patients are frequently not aware of the presence of the plaques. Advanced age is largely responsible for predisposition to the condition, since in the aged dehydration and progressive sclerosis of the connective tissue of the entire body, as well as of the external tunic of the eye, occur. It is probably the result of a local nutritional disturbance, which in turn is due to arteriosclerotic changes. The fact that this unusual degenerative condition of the sclera has a predilection for the area lying in front of the insertions of the rectus muscles suggests that the changes occur not only because of local circulatory disturbances but because of the constant stress and strain on the sclera fibers, which are in such close proximity to the insertions of the rectus muscles. The plaques are situated about 3 mm. from the limbus and 1.5 to 2 mm. anterior to the insertions of the rectus muscles. They are generally rectangular, but occasionally only a rounded or oval patch situated opposite either end of the insertion of a rectus muscle is observed. Microscopic studies have shown that in place of normal sclera there remain some cellular and nuclear fragments and large masses of hyalin. There is general atrophy of the overlying conjunctiva and episclera. A condition without real resemblance, but which has been confused with it, is scleromalacia perforans. The two conditions are alike only in their chronicity and in the fact that they affect the sclera predominantly. Scleromalacia perforans is primarily necrotic in origin, whereas senile hyaline sclera plaques are primarily degenerative in character.

## Bulletin of Johns Hopkins Hospital, Baltimore

**77**:291-344 (Oct.) 1945

Studies on Patients Convalescent from Fracture: III. Urinary Excretion of Calcium and Phosphorus. J. E. Howard, W. Parson and R. S. Bigham.—p. 291.
Comparison of Antithyroid Action of Thioureas and Allied Substances. R. H. Williams and E. G. Frame.—p. 314.
Brachymetopody. D. H. Hooker.—p. 329.
Microdetermination of Antimony. T. H. Maren.—p. 338.

## Bulletin New York Academy of Medicine, New York

**21**:561-624 (Nov.) 1945

Medical and Public Health Importance of the Insecticide DDT. F. C. Bishopp.—p. 561.
Clinical Observations on Treatment of Various Infections with Penicillin. D. G. Anderson.—p. 581.
Certain Biologic Factors in Human Disease. G. Draper.—p. 599.
A Critique of Psychotherapy in Arterial Hypertension. C. Binger.—p. 610.
Trichinosis, a Major Health Problem in the United States: What Shall Be Done About It? S. E. Gould.—p. 616.

## Journal of Allergy, St. Louis

**16**:261-322 (Nov.) 1945

Measurement of Circulating Ragweed Antigen. Mary C. Johnson, H. L. Alexander, J. H. Alexander and H. M. Walker.—p. 261.
Quantitative Estimation of Absorption of Ingested Allergen. J. R. Spies, D. C. Chambers, H. S. Bernton and H. Stevens.—p. 267.
Quantitative Study of Relation of Synthetic 3-Pentadecyl Catechol to Hypersensitiveness to Rhus Toxicodendron (Poison Ivy) as Shown by Patch Test. H. Keil, D. Wasserman and C. R. Dawson.—p. 275.
Spontaneous Mediastinal and Subcutaneous Emphysema Complicating Bronchial Asthma: Report of Additional Case and Analysis of 25 Previously Reported Cases. E. Schwartz.—p. 279.
Mold Allergy: I. Field Survey of Philadelphia Area. G. I. Blumstein and S. U. McReynolds.—p. 285.
Relief of Dermographism and Other Urticarias of Histamine Origin by a Synthetic Benzhydryl Alkamine Ether. S. M. Feinberg and S. Friedlaender.—p. 296.
Contact Dermatitis Due to Contact with Chrome 17 per Cent Steel Identification Tags of United States Navy. M. C. Harris.—p. 299.

## Journal of Clin. Endocrinology, Springfield, Ill.

**5**:363-406 (Nov.) 1945

*Treatment of Post-Traumatic Simmonds' Disease with Methyl Testosterone Linguets. H. Lisser and L. E. Curtis.—p. 363.
Accumulation, Interpretation and Presentation of Data Pertaining to Metabolic Balances, Notably Those of Calcium, Phosphorus and Nitrogen. E. C. Reifenstein Jr., F. Albright and S. L. Wells.—p. 367.
Pheochromocytoma: Case Report, with Certain Observations on Pathologic Physiology. E. J. Mortell and J. P. Whittle.—p. 396.
Effect of Thiouracil on Human Tissues. W. S. Reveno.—p. 403.

**Methyl Testosterone Linguets in Post-Traumatic Simmonds' Disease.**—Lisser and Curtis report that a man in 1935, at the age of 20, sustained multiple fractures of the skull in a motorcycle accident. After the injury there were noted polydipsia and polyuria. In the first two months there was a loss of 33 pounds (15 Kg.). During the succeeding eighteen months there was progressive loss of facial and body hair, loss of libido and potentia and increasing fatigability, and the skin acquired a fawn color. There also had been a considerable decrease in mental acuity, with the concomitant development of phobias. The endocrinopathy was diagnosed as "post-traumatic Simmonds' disease" or panhypopituitarism. From 1936 to 1938 the patient received various pituitary extracts, with little if any improvement. In 1942 the patient began to have attacks of pain in the chest and back and hematuria associated with nausea and vomiting. Injections of gonadotropin were started and continued for about ten months. The patient believed that this medication increased his strength and stopped his pain, nausea and vomiting and possibly increased the growth of general body hair. Physical examination did not show special change. Methyl testosterone linguets were now prescribed in a dosage of 20 mg. daily for ten weeks, then 15 mg. daily for six weeks, and 5 mg. daily from Nov. 9, 1944. The latter dose proved insufficient and was increased to 10 mg. daily on Feb. 1, 1945. During the period of testosterone therapy, growth of pubic hair, beard and general body hair occurred. Libido has returned to normal. Erections occur often, the patient has married, and marital relations are satisfactory. He is now working from ten to fourteen hours a day. His physical strength is now much greater, and there has been an increase of 9.5 Kg. in weight.

Six months after testosterone therapy was instituted the basal metabolic rate had risen from minus 28 per cent to plus 2 per cent and the serum cholesterol had dropped from 278 mg. per hundred cubic centimeters to a normal value of 170 mg.

## Journal of Neurosurgery, Springfield, Ill.

**2**:463-556 (Nov.) 1945

Transventricular Wounds of Brain. W. G. Haynes.—p. 463.
Extensive Brain Wounds: Analysis of 159 Cases Occurring in a Series of 342 Penetrating War Wounds of Brain. W. G. Haynes.—p. 469.
*Spasm of Internal Carotid Artery. A. D. Ecker.—p. 479.
Neurogenic Ossifying Fibromyopathies: Preliminary Report. A. B. Soule Jr.—p. 485.
Serous Meningitis. H. C. Voris.—p. 498.
Prevention of Nerve Regeneration and Neuroma Formation by Caps of Synthetic Resin. M. V. Edds Jr.—p. 507.
Early Nerve and Bone Repair in War Wounds. H. G. Schwartz and J. M. Parker.—p. 510.
Antigenicity of Bovine Thrombin: Clinical Evaluation. R. U. Light. —p. 516.
Clovis Vincent, Neurosurgeon and Patriot. R. Rabinovitch.—p. 530.

**Spasm of Internal Carotid Artery.**—Ecker reports 4 cases of dysfunction of the brain due to relatively mild trauma of the internal carotid artery. The first 3 were cases of penetrating wounds of the neck without laceration or thrombosis of the artery or any evidence of direct head injury. The fourth case was a blunt head injury with fracture of the skull and postmortem evidence of brain swelling and ischemic necrosis of the wall of the internal carotid artery. The common denominator in all 4 cases was the application of force to the carotid artery, resulting in spasm of this vessel. Within ten minutes there resulted dysfunction of the cerebral hemisphere on the same side, which persisted for a period varying with the degree of anoxemia produced. There was swelling of the brain, which probably reached its maximum in twenty-four hours and lasted at least three days. This brain swelling may be due in part to a vasoparalysis of the central nervous system, which in turn may be closely associated with narrowing of the cerebral arteries. Dilatation of the cerebral ventricles, especially on the same side, may be a permanent residuum. The syndrome of spasm of the internal carotid artery consists of (1) dysfunction of a cerebral hemisphere, (2) brain swelling in the acute stage, (3) internal hydrocephalus in a late stage and (4) narrowing of the cerebral arteries.

## New England Journal of Medicine, Boston

**233**:607-638 (Nov. 22) 1945

Dermatome Skin Grafts for Burns in Patients Prepared with Dry Dressings With and Without Penicillin. S. M. Levenson and C. C. Lund, with technical assistance of M. E. Lamb and Alice K. Daly.—p. 607.
*Nutritional Defects Among Children in Vermont. H. B. Pierce, P. F. Fenton, W. Wilkins, M. E. Newland and Pauline S. Budge.—p. 612.
Medical Progress: Rheumatoid Arthritis: Its Varied Clinical Manifestations. Marian W. Ropes and W. Bauer.—p. 618.
Subacute Yellow Atrophy of Liver.—p. 624.
Adenocarcinoma of Sigmoid, with Extension to Ileum; Ileocolic Fistula. —p. 627.

**Nutritional Defects Among Vermont Children.**—Pierce and his associates made a survey of the nutritive status of 386 Vermont school children selected to represent rural and urban groups of various ages and economic levels. A review of the food intake showed the greatest defect to be the low intake of fruits and vegetables. Blood studies revealed that 25 per cent of a group of 176 children had plasma vitamin C levels below 0.6 mg. per hundred cubic centimeters, and on physical inspection 40 per cent of the entire series had inflammation of the gums of varying intensity. Severe forms of spongy, bleeding gums were found in only a small percentage of the children. Six per cent of 170 children had low hemoglobin values suggestive of a mild anemia. Urban children had higher hemoglobin levels than did rural children. Skeletal changes usually associated with rickets were found in about 85 per cent of the children. Signs associated with a shortage of riboflavin were found in a small percentage of the children, but they could not be accepted as definitely indicating any serious deficiency of this vitamin. Some degree of folliculosis, at least of the outer aspect of the arm, was found in 40 per cent of the children, and 5 of these subjects had a generalized folliculosis. Mild cases of follicular conjunctivitis were frequent. Premature loss of the teeth and dental caries were found to be extremely prevalent.

## Psychoanalytic Quarterly, Albany, N. Y.

**14**:437-596 (Oct.) 1945

Amnesic States in War Neuroses: Psychogenesis of Fugues. C. Fisher. —p. 437.
"Repression" in Prefreudian American Psychiatry. H. A. Bunker. —p. 469.
Psychologic and Psychodynamic Aspects of Disturbances in Sleep Mechanism. C. Davison.—p. 478.
Psychoanalytic Observations on Dreams and Psychosomatic Reactions in Response to Hypnotics and Anesthetics. B. Mittelmann.—p. 498.
Interpretation of Typical and Stereotyped Dream Met with Only During Psychoanalysis. S. S. Feldman.—p. 511.
The Negative of Dreams. N. Fodor.—p. 516.
Mechanism of Hysteria Elucidated During Hypnoanalysis. L. R. Wolberg.—p. 528.

## Psychosomatic Medicine, Baltimore

**7**:321-394 (Nov.) 1945

Hormonal Modifications of Social Behavior: I. Effect of Sex Hormone Administration on Social Status of Male Castrate Chimpanzee. G. Clark and H. G. Birch.—p. 321.
Sleep Paralysis and Combat Fatigue. C. Van der Heide and J. Weinberg.—p. 330.
Correlation Between Emotions and Carbohydrate Metabolism in 2 Cases of Diabetes Mellitus. A. Meyer, L. N. Bollmeier and F. Alexander. —p. 335.
Effects on Industrial Production of Administration of Delta 5 Pregnenolone to Factory Workers: I. G. Pincus and H. Hoagland.—p. 342.
Effects on Industrial Production of Administration of Delta 5 Pregnenolone to Factory Workers: II. G. Pincus, H. Hoagland, C. H. Wilson and N. J. Fay.—p. 347.
Effect of Pregnenolone on Ability to Perform Prolonged Psychomotor Tests. Isabel Graham-Bryce, A. K. Bullen and W. H. Forbes.—p. 353.
Detection and Management of Personality and Psychosomatic Disorders Among Industrial Personnel. B. Mittelmann, A. Weider, H. A. Vonachen, M. Kronenberg, Norma Weider, K. Brodman and H. G. Wolff.—p. 359.

## Review of Gastroenterology, New York

**12**:393-468 (Nov.-Dec.) 1945

Fungous Disease of Spleen: Report of Case. A. Bassler.—p. 413.
Dietary Considerations in Malignant Neoplastic Diseases: Preliminary Report. M. B. Gerson.—p. 419.
*New Aspect in Treatment of Amebiasis. B. Sokoloff.—p. 425.
Profenil—New Antispasmodic: Preliminary Report. S. Weiss.—p. 436.

**New Treatment of Amebiasis.**—Sokoloff found that lactic acid, even in a weak solution of 1:1,000, impedes the multiplication of protozoa, including amebas. Since ingested lactic acid is actively absorbed in the small intestine and therefore is of little use in the treatment of infections of the large intestine, a special anhydrous form of lactic acid, trilactic, was developed. Trilactic dissolves in water slowly and for this reason reaches the colon and cecum without being affected greatly by the gastric juice. Research has demonstrated that trilactic has a therapeutic effect in animals infected with pathogenic bacteria. Rats infected with Endameba histolytica were submitted to trilactic therapy. Although they had only a mild form of amebiasis, their stools showed presence of trophozoites and cysts. These disappeared after seven days of treatment with trilactic. The animals seemed to have been completely cured. During the last five years trilactic has been tested on a number of patients with amebic infection. In many instances they received the trilactic treatment after emetine had failed to eliminate completely the pathogenic ameba, or when the patient had experienced a toxic reaction from this drug. In a few instances trilactic was administered after protracted iodine therapy when stools still showed presence of the cysts. Such combined therapy showed the most satisfactory results not only in the complete elimination of the ameba but also in the prompt restoration of the normal bowel movement. Sixty-two patients affected with acute and chronic amebic infections have been treated with the anhydrous form of lactic acid known as trilactic. Complete recovery was obtained in 36, improvement in 15 and negative results in 11 patients.

## Rhode Island Medical Journal, Providence

**28**:701-776 (Oct.) 1945

Hugh Owen Thomas—Apostle of Rest. R. Hammond.—p. 715.
Postconvalescent Care of Rheumatic Fever. L. A. Sieracki.—p. 720.
Pneumococcic Meningitis Successfully Treated with Combined Penicillin and Sulfadiazine Therapy. R. G. Murphy and F. B. Cutts.—p. 722.
Medical Opinion in Rhode Island: Report 1. Diagnostic Centers. Prepared by the Committee on Postgraduate Education. A. M. Burgess, B. E. Clarke, H. P. B. Jordan, E. S. Wing and J. F. Kenney.—p. 725.

## FOREIGN

An asterisk (*) before a title indicates that the article is abstracted below. Single case reports and trials of new drugs are usually omitted.

### Australian J. Exper. Biol. and M. Science, Adelaide

**23**:165-247 (Sept.) 1945. **Partial Index**

Natural Resistance Against Diphtheria Toxin. E. Singer.—p. 165.
Studies on Detoxication of Toxins: Catalytic Breakdown of Crystalline Ovalbumin. M. H. Petherick and E. Singer.—p. 171.
Studies on Hirst Hemagglutination Reaction with Influenza and Newcastle Disease Viruses. F. M. Burnet, W. I. B. Beveridge, J. McEwin and W. C. Boake.—p. 177.
Further Notes on Lytic Phenomenon Shown by Group B Streptococci. E. Munch-Petersen, R. Christie and R. T. Simmons, with technical assistance of H. A. Beddome.—p. 193.
Action of Halogens on Influenza Virus, with Special Reference to Action of Iodine Vapor on Virus Mists. J. D. Stone and F. M. Burnet.—p. 205.

### British Journal of Experimental Pathology, London

**26**:217-276 (Aug.) 1945. **Partial Index**

Lysis of Red Blood Cells by Tissue Slices. G. Brückmann and E. Wertheimer.—p. 217.
Effect of Sulfanilamide on Arginine and Carbon Dioxide Requirements of Streptococci (Lancefield Group D). E. F. Gale.—p. 234.
Examination of Rabbit Anti-A Immune Serums Produced by Means of Artificial A-Antigen. W. T. J. Morgan and W. M. Watkins.—p. 247.
New Test for Detection of Weak and "Incomplete" Rh Agglutinins. R. R. A. Coombs, A. E. Mourant and R. R. Race.—p. 255.
Comparative Potency of Mammary Tumor Agent of Mice of Different Genetic Constitution. L. Dmochowski.—p. 267.
Experimental Nodular Goiter. F. Bielschowsky.—p. 270.

### British Journal of Ophthalmology, London

**29**:557-612 (Nov.) 1945

Intraocular Foreign Bodies: Problems of Localization and Operative Procedure. J. Kraus and W. A. Briggs.—p. 557.
War Surgery of the Eye in Forward Areas. E. C. Zorab.—p. 579.
Ophthalmology in the British North African and Central Mediterranean Forces. B. W. Rycroft.—p. 594.

### British Journal of Radiology, London

**18**:369-402 (Dec.) 1945

Fifty Years of X-Ray Production and Measurement in Medical Radiology. E. A. Owen.—p. 369.
*Pneumonoconiosis in Radiator and Boiler Finishers. L. Dunner, R. Hermon and D. J. T. Bagnall.—p. 377.
Design of Filters to Produce "Flat" X-Ray Isodose Curves at Given Depth. A. E. Chester and W. J. Meredith.—p. 382.
Standardization of Radiologic Apparatus: Symposium. F. Ellis, J. W. McLaren and J. Read.—p. 385.
Investigation of Free Gas in Peritoneal Cavity. J. E. Bannen.—p. 390.
Radiologic Appearances of the Chest Following Partial Asphyxiation by Smoke Screen. P. H. Whitaker.—p. 396.
New Method of Primary Screening by X-Ray Examination. A. Scheel.—p. 398.

**Pneumonoconiosis in Radiator and Boiler Finishers.**—Dunner and his associates found that 10 of 13 men who were radiator and boiler finishers showed changes in their chest roentgenograms. The men engaged in this work inhale a great quantity of dust. The dust consists mainly of silica from the sand, iron derived from the boilers and radiators, and carbon from the burnt oil. The roentgenologic aspects are of greatest importance for diagnosis. They consist of a fine mottling, especially noticeable in the mid and lower zones of the lung. Fibrosis, such as occurs in boiler scalers and graphite workers, has not been encountered. Eleven of the 13 men have been coughing or spitting for years and 3 of them have complained of shortness of breath, but 11 have felt fit for work. Two of the 13 men felt ill and unfit for the job. One of these ceased work as a finisher. The chest roentgenogram of this man shows rather dense mottling in the lung. The second patient—56 years of age—feels unfit after having worked in the department for thirty-six years, but the roentgenogram of his chest does not reveal evidence of occupational disease. His condition appears to be attributable to emphysema and premature senility. Whether the appearances in the lung are due only to the deposits of dust or whether there are also reactions of the lung tissue can be decided only by postmortem examination or by experimental work on animals. If the condition proves to be a form of silicosis, then, in the event of disability, these men would be entitled to compensation. In any event, measures of prevention should be instituted, and regular x-ray examination is desirable.

### British Medical Journal, London

**2**:755-794 (Dec. 1) 1945

The Renaissance and Its Influence on English Medicine, Surgery and Public Health. A. S. MacNalty.—p. 755.
*Prevention of Homologous Serum Jaundice. J. F. Loutit and K. Maunsell.—p. 759.
Ear Disease in Children. D. R. Paterson.—p. 761.
Poisoning Due to Mobilization of Lead from Skeleton by Leukemic Hyperplasia of Bone Marrow. A. Brown and S. L. Tompsett.—p. 764.
Case of Chronic Undermining Ulceration Treated with Penicillin. A. Leacock.—p. 765.
Tropical Medicine in War and Peace. C. M. Wenyon.—p. 774.

**Prevention of Homologous Serum Jaundice.**—Loutit and Maunsell say that homologous serum jaundice occurs from 40 to 160 days after the introduction of foreign homologous serum into a recipient. This introduction may be accidental, as during routine venipuncture with syringe and needle for blood samples for blood sugar determinations or routine intravenous injections (e. g., arsphenamine, pentothal), called "syringe jaundice." Traces of foreign blood are believed to have been left in the syringe and, through failure to clean and sterilize the syringe, this foreign serum gained access to the subject's circulation. The introduction of foreign serum may be deliberate, such as in serum or plasma transfusion, prophylactic injections of measles and mumps convalescent serum or normal adult serum and yellow fever vaccination in which human serum is the suspension medium for the killed virus. In the accidental variety of serum jaundice adequate cleaning and sterilization of syringes and needles has been shown to reduce the incidence of postarsphenamine jaundice practically to zero. When the introduction of serum is deliberate, prevention of homologous serum jaundice is much more difficult. The yellow fever vaccine problem was solved only by giving up the use of serum as a suspension medium. The authors direct attention to the good results obtained by MacCallum and Bauer but suggest that their good results may have been due not to apparently healthy donors but to using unpooled serums. Homologous serum jaundice often follows transfusion of serum or plasma. It appears to be uncommon after transfusion of whole blood. The authors therefore decided to investigate the results of introduction of single serums into a number of recipients and to compare the incidence of jaundice with that in a series of cases in which only blood transfusion had been given. Each of 99 individual serums was injected into an average of 6 normal recipients. Homologous serum jaundice was not detected within 150 days. Frank homologous serum jaundice did not occur in a selected series of 213 blood transfusions. Two possible cases of homologous serum jaundice following blood transfusion alone are recorded. Since these experiments with individual serums suggest that they are as safe as individual bloods, it is recommended that individual serums should be used for therapeutic and prophylactic purposes.

### Journal of Laryngology and Otology, London

**60**:91-144 (March) 1945

Otolaryngology in the Army: Review of Four and One-Half Years in Middle East. R. B. Lumsden.—p. 91.
Effect of Sinusitis on Flying Personnel. G. H. Bateman.—p. 110.
Diverticula of Thoracic Portion of Esophagus: Case. J. A. Seymour-Jones.—p. 121.
Case of Recurrent Toxic Hebetude from Chronic Mastoiditis. W. S. Adams.—p. 126.

### Journal of Physiology, Cambridge

**104**:105-238 (Oct.) 1945

Experiments on Hypothalamic-Pituitary Control of Water Excretion in Dogs. Mary Pickford and A. E. Ritchie.—p. 105.
Study of Effects of Rapid "Decompression" in Certain Animals. P. Eggleton, S. R. Elsden, J. Fegler and C. O. Hebb.—p. 129.
Effect of Cutaneous Burns on Histamine in Mice. J. Dekanski.—p. 151.
Vasodilatation in Human Skeletal Muscle During Posthemorrhagic Fainting. H. Barcroft and O. G. Edholm.—p. 161.
Resting and Action Potentials in Single Nerve Fibers. A. L. Hodgkin and A. F. Huxley.—p. 176.
Excretion of Urea, Salts and Water During Periods of Hydropenia in Man. R. A. McCance.—p. 196.
Action of Gonadotropic Hormone and Pituitary Corticotropic Hormone on Cholesterol Content of Adrenals. R. A. Carreyett, Y. M. L. Golla and M. Reiss.—p. 210.
Effect of Intensity of Illumination on Matching of Solutions of Carboxyhemoglobin. J. L. D'Silva and F. M. G. Stammers.—p. 215.

## Lancet, London

2:729-764 (Dec. 8) 1945

*Cultivation of Rickettsia Tsutsugamushi in Lungs of Rodents: Preparation of a Scrub Typhus Vaccine. F. Fulton and L. Joyner.—p. 729.
Scrub Typhus Vaccine: Large Scale Production. F. E. Buckland and others.—p. 734.
*Poisoning by Barium Carbonate. W. Morton.—p. 738.
*Thiouracil in Pregnancy: Effect on Fetal Thyroid. L. J. Davis and W. Forbes.—p. 740.
Direct Laryngoscopy and Tracheal Intubation: Simple Method. B. Kenton.—p. 742.

**Cultivation of Tsutsugamushi Rickettsia in Rodents.**—Fulton and Joyner describe a method of adapting Rickettsia tsutsugamushi to grow in the lungs of mice. Still better yields were obtained by passing the mouse lung adapted strain into the lungs of cotton rats. A vaccine prepared from cotton rat lung suspension protected mice subsequently infected with living R. tsutsugamushi. The best protection was obtained when the mice were vaccinated intraperitoneally and infected by the same route, but some protection could also be demonstrated when the mice were vaccinated subcutaneously and infected by the intraperitoneal route. Without a field trial it is impossible to decide whether or not this vaccine will be of value in man.

**Poisoning by Barium Carbonate.**—Morton describes two attacks of food poisoning which involved 85 British soldiers in an area of the Persia/Iraq command and were subsequently shown to be due to barium carbonate. In the first outbreak 13 men were admitted to a military hospital with acute gastroenteritis. The men were taken ill one hour after their evening meal, which consisted of meat and vegetables followed by marmalade tart. Three sergeants who had refused the tart were not affected. Five soldiers who had eaten some of the remaining tart but no other part of the meal also became ill and were admitted to the hospital. Before laboratory findings regarding the first outbreak, other than those excluding arsenic as the poison, were available 71 men in the same unit were taken ill two hours after a meal. Of these, 31 were admitted to the hospital and 40 were treated in the unit. The meal consisted of meat, vegetables and treacle tart. Again only the men who had eaten the tart were affected. A chemical analysis of the pastry of the tarts revealed large quantities of barium carbonate. At the supply depot a sack containing 4 pounds of barium carbonate for use as rat poison had been placed in error in the flour store, filled with ordinary flour and issued to the unit. This flour had been used only for the pastry of the tarts. The symptoms consisted of an initial phase of gastroenteritis with tingling sensations of the face and neck, followed by loss of tendon reflexes, disordered action of the heart and muscle paralysis. In a few severe cases paralysis spread and became generalized, in 1 case leading to almost complete respiratory paralysis. Recovery was rapid, and there were no deaths.

**Thiouracil in Pregnancy.**—Davis and Forbes report that a woman aged 21 who was admitted to a hospital in April 1944 with the symptoms of mild thyrotoxicosis and who had been delivered of a healthy child six months previously was given thiouracil 600 mg. daily. This treatment was well tolerated and gave considerable symptomatic benefit. The patient was discharged from the hospital on July 6, 1944 and instructed to take thiouracil 200 mg. daily. Thereafter she was seen at short intervals, and on each occasion her general condition was excellent. When seen in November she believed that she had recently become pregnant. Thiouracil was therefore reduced to 200 mg. on alternate days. A month later her condition was still satisfactory and the diagnosis of pregnancy confirmed. She continued to take thiouracil as directed and remained in good health until March 18, when she complained of headache, which persisted during the next two days, and on March 20 she suddenly became cyanosed, collapsed and died. She was then six months pregnant. Necropsy studies were made on the mother and the fetus. The cause of the mother's death was uncertain. The thyroid of the fetus was enlarged and hyperplastic, as compared with a presumably normal gland from a premature infant, and showed histologic evidence of considerable functional activity. It resembled the gland of an adult receiving too much thiouracil. Administration of thiouracil to pregnant women, and probably to nursing mothers, demands caution.

## Practitioner, London

155:257-328 (Nov.) 1945

Recent Advances in Treatment: Surgery. W. H. Ogilvie.—p. 257.
Chemotherapy. L. Whitby.—p. 264.
Industrial Medicine. D. Hunter.—p. 270.
Rehabilitation. H. Balme.—p. 287.
Arthritis and Chronic Rheumatism. D. H. Collins.—p. 293.
Physical Medicine. F. S. Cooksey.—p. 300.
Intestinal Infestations. E. H. V. Hodge.—p. 306.
Allergy. D. Harley.—p. 313.

## Confinia Neurologica

6:57-168 (No. 2/3) 1944. **Partial Index**

Method of Correlation to Ventricular Capacity Applied to Various Neuropsychic Disorders. A. Melley.—p. 57.
II. Biological Study and Ventriculography in Fully Developed Cerebrotrigeminal Angiomatosis. Denise Louis-Bar and F. Verschueren.—p. 65.
*Syndrome of Amyotrophic Lateral Sclerosis Caused by Cervical "Hour Glass Tumor." T. De Lehoczky and L. Piri.—p. 71.

**Cervical Tumor Simulating Amyotrophic Lateral Sclerosis.**—De Lehoczky and Piri report the case of a neurogenous, epidural and paravertebral tumor is a boy aged 16. Two years prior to admission the boy had developed pain in the neck and later pain in the left hand with increasing weakness and paresthesia in the left arm. One year later the same symptoms appeared in the right arm and in the right leg. On admission neither pain nor paresthesia was present, but the patient's strength was diminished and his muscles were atrophic. There was an egg sized tumor in the left supraclavicular fossa which could be traced to the left transverse process of the sixth and seventh cervical vertebrae. The sixth cervical intravertebral foramen was enlarged on the left side. The tumor, 9.5 cm. in length and 3.7 cm. in width, was removed in one piece through cervical approach without resort to laminectomy. On microscopic examination the tumor proved to be a typical neurilemmoma. It is suggested that the hour glass tumor gave rise to the symptoms by pressure of its intraspinal prolongation on the ventral part of the cord, the anterior pyramidal tract and the anterior gray horn cells. The removal of the tumor was followed by rapid improvement in the severe paralytic syndrome. This may be explained because of the epidural location of the intraspinal part of the tumor.

## Hospital, Rio de Janeiro

28:339-490 (Sept.) 1945. **Partial Index**

*Siderosis Bulbi. A. Paulo Filho, S. Rafael Sebas and A. Giardulli.—p. 339.
BCG in Adults. F. de P. Ferreira da Cunha.—p. 417.

**Siderosis Bulbi.**—A man harbored a chip of iron in his eyeball for eleven years before the appearance of siderosis bulbi. The cornea and muscular tissues of the iris did not contain iron pigment. This was selectively located on the retina in the form of accumulations of free pigment in granulations. The iron in the eyeball was ionizable. Paulo Filho and his associates believe that the first change caused by metallic iron is the partial coagulation of the cytoplasm. Later the newly formed granulations of iron pigment cause necrosis of the retinal cells, with consequent blindness.

## Revista Medica de Chile, Santiago

73:755-832 (Sept.) 1945

*Physiopathology and Therapy of Hepatic Cirrhosis. R. Yazigi, A. Jedlicky, H. Vasquez, E. Cumsille and L. Spektor.—p. 755.
Roentgenologic Diagnosis of Bronchiectasis. F. Daza.—p. 774.
Bronchoscopy in Bronchiectasis. A. Gez.—p. 778.
Medical Treatment of Bronchiectasis. R. Valdivieso D.—p. 781.
Intracardiac Nervous Apparatus, a Perplexing Regulatory Mechanism. F. Hoffman, S. Middleton and J. Talesnik.—p. 784.
Determination of Salicylic Acid in Blood. J. Cabello R.—p. 788.
Gastric Juice and Malignant Gastric Lesions: Comparison of Hydrochloric Acid with That Encountered in Group with Gastric and Duodenal Ulcers. H. Alessandri, J. Lerner and R. Sanz.—p. 793.

**Physiopathology and Therapy of Hepatic Cirrhosis.**—Yazigi and his associates report observations on 21 patients with hepatic cirrhosis, whom they treated with direct transfusions of the ascitic fluid. They usually began with injections of from 100 to 150 cc. and cautiously increased the quantity until in some cases they had given as much as 1,000 cc. Favorable results usually became manifest rather early. If after five or six transfusions the diuresis does not increase, the treatment will usually result in failure. There were 9 immediate successes

and 12 failures. The injections were given every two or three days. Twelve other ascitic patients were treated with blood transfusions. In this group there were 6 immediate successes and 6 failures. The authors were unable to estimate late results in these cases. Both treatments were given without ill effects.

## Acta Chirurgica Scandinavica, Stockholm

**92**:387-479 (Oct. 5) 1945. **Partial Index**

Peculiar Bone Tumor (Osteoid Osteoma or Corticalis Osteoid): Case Report. I. Palmer.—p. 387.
Caput Necrosis After Traumatic Dislocation of Hip Joint in 4 Year Old Boy, and Control Examinations of 8 Cases of Luxatio Coxae Traumatica. S. Quist-Hanssen.—p. 393.
Injury to Pancreas Causing Rise of Temperature After Splenectomy. E. Saarenmaa.—p. 403.
*Edema in Surgical Patients. L. Efskind.—p. 419.
*Treatment of Bilateral Acoustic Tumors: Report of 6 Surgical Cases, with Review of 13 Cases from Literature. R. Frykholm.—p. 451.
Testicular Prosthetics After Legal Castration. H. Wulff and K. Sand. —p. 470.

**Edema in Surgical Patients.**—Efskind reports observations on 72 patients with different surgical diseases. None of them presented organic lesions (cardiac, renal, vascular) which might predispose to edema. Sixty-nine of the patients were operated on, and edema was as a rule observed during the postoperative period. The presence of edema was ascertained by finger pressure. Hypoproteinemia is relatively frequent in patients with chronic surgical disorders, since the disorder itself and the operation lead to a drop in the protein content of the blood. Acute hypoproteinemia is usually not associated with edema, even when the protein values are very low. In chronic hypoproteinemia, edema may occur with relatively high protein content. In the author's cases the critical concentration for the occurrence of edema was at about 5.6 per cent total protein; the corresponding concentration in the declining phase was on the average 6.1 per cent. Both these figures are not absolutely fixed values but depend on the length of time the hypoproteinemia and the edema have existed and on their degree of intensity. The absolute limit below which edema invariably appeared was at 4.5 per cent. By converting the protein values into the values for osmotic pressure, the best information as to threatened edema may be provided. In the prophylaxis and treatment of edema in surgical patients the most important primary predisposing factor is hypoproteinemia, which may often be combined with abnormal distribution of fractions. Isolated decrease in the content of albumins seems to be of minor importance. Of the secondary predisposing factors the fluid-salt factor occupies first place. Other secondary factors are the patient's age and general condition, the operative trauma and possible infection. Liver function and its mobile store of proteins are important with respect to the normal regulation of the fluid-salt balance. Protein deficiency is a considerably more important factor than the increased losses in proteins, but a reduced production also seems to play an important part in the hypoproteinemia of surgical patients.

**Bilateral Acoustic Tumors.**—Frykholm reports 6 cases of bilateral acoustic tumors in 3 men and 3 women, 5 of them between the ages of 20 to 28 and the sixth a woman aged 44. All the patients were operated on, 1 of whom died during the operation and 2 others showed no improvement and survived only one to two months. The 3 remaining patients were relieved from most of their distressing subjective symptoms and showed improvement in their work capacity. One of them has survived the bilateral intracapsular enucleation of the tumors for more than seventeen years. In the 2 cases in which surgical intervention was performed early, the treatment resulted in definite benefit. Cases of general neurofibromatosis in which the lesions are widely distributed within the central and peripheral nervous systems with the severe alterations not due to the acoustic tumors should be excluded from surgical treatment. In all cases a bilateral exposure of the cerebellum should be performed. The dura should not be sutured when the wound is closed unless both tumors have been radically removed. If some hearing function is preserved, the tumor on the side on which loss of hearing is most advanced should be attacked first and its removal performed as radically as possible, preferably with preservation of the facial nerve. The patient will probably not improve completely, but he will certainly be in a better condition than if he was totally deaf. The other tumor is not attacked until the general condition begins to deteriorate or loss of hearing is complete. If improvement is not attained by the unilateral extirpation and if the patient's condition is desperate, the other tumor may be extirpated in a second session without regard to hearing function but avoiding a bilateral facial paralysis. If the patient is already completely deaf, both tumors should be removed as radically as possible. This can be performed in one or two stages, depending on how well the operation is tolerated. If the facial nerve has been preserved during the removal of one tumor, a radical extirpation may be attempted on the opposite side; otherwise only an intracapsular enucleation is performed.

## Acta Medica Scandinavica, Stockholm

**122**:193-279 (Oct. 5) 1945

*Effect of Intravenous Injection of Acetylcholine in Man: I. Observations on Normal Persons. M. Segers, J. Lequime and H. Denolin.—p. 193.
*Examination of Tongue: Clinical and Photographic Study. A. Frantzell, R. Törnquist and J. Waldenström.—p. 207.
Functional Prolongation of PQ Time of Electrocardiogram Based on Certain Case. E. Halminen.—p. 238.
Provocation Factor in Pathogenesis of Erythema Nodosum, with Special Reference to Case of Tuberculous Infection in Skin. S. Löfgren. —p. 245.
Special Type of "Rheumatic" Disease. J. E. Holst and Esther Johansen. —p. 258.
Case of Leukemic Myelomatosis (Plasma Cell Leukemia). A. Søeborg-Ohlsen and O. P. Nielsen.—p. 271.

**Acetylcholine Injections in Normal Persons.**—Segers and his co-workers report the results of 250 intravenous injections of 40 persons with 2 per cent acetylcholine solution, most of whom did not suffer with any cardiovascular disorder. The changes in the heart action which are produced in man by the rapid injection of acetylcholine resemble those occurring in animals, but the duration of these changes in man is more brief and consequently they are better tolerated. The slowing of the pulse rate is associated with a considerable fall in the blood pressure. Electrocardiographic recordings demonstrated an inhibition of the superior automatic centers, decrease in amplitude or disappearance of the P wave, lengthening of the auriculoventricular conduction time and in certain cases a shortening of the QT interval, occasionally accompanied by a lowering of the ST segment. The inhibitory effects, whose duration as a rule does not exceed half a minute, may be produced by doses of acetylcholine which vary considerably in different persons. The particular tolerance of each patient must be ascertained with increasing doses of acetylcholine; the injection must be repeated at five minute intervals by adding 0.02 Gm. to the preceding dose. The degree of tolerance of each person can be appreciated by the slowing of the pulse; this tolerance is constant and does not change from day to day. The brief cardioinhibitory phase which occurs as the result of the acetylcholine injection is followed by a phase of quickening of the pulse, which continues for about one minute and during which frequent extrasystoles arise. A brief attack of auricular flutter or of auricular fibrillation occurred in exceptional cases after an injection of more than 0.1 Gm.

**Examination of Tongue.**—Frantzell and his associates carried out a clinical and photographic investigation of tongues from 200 normal persons and 1,300 patients with various diseases in the medical and surgical clinics of the University of Uppsala. A special photographic method for the examination of the tongues was used. The patient presses the tongue against a glass slide so that the surface of the tongue lies in one plane, which is required for a sharp picture. Smooth tongue was the most common pathologic change and was present in 102 patients. An attempt was made to analyze the causes of smooth tongue. It was found that the condition could be attributed to iron deficiency in 27 cases. Other diseases in which smooth tongue was comparatively common were pneumonia, decompensated heart disease and malignant tumors. In 31 of the 102 cases no relationship was found between the disease and the smooth tongue. In pernicious anemia a smooth tongue is a common finding, and this condition was noted in 131 patients prior to treatment. In iron deficiency and in pernicious anemia cure of the atrophy of the papillae could nearly always be obtained with specific therapy. Only 14 of 135 cases of pernicious anemia were refractory to liver treatment. In 4 of these iron or yeast caused a rapid improvement. Four cases of paralysis agitans presented

a smooth tongue; in 1 of these cases treatment with pyridoxine injections was practiced but proved ineffective. The effect of a dental prosthesis on the surface of the tongue was studied. Fourteen per cent of the men and 47 per cent of the women had an upper prosthesis. The presence of a prosthesis did not materially interfere with the effect of therapy. The prosthesis is not to be considered as the chief causative factor of the atrophy of the papillae, but the possibility that a prosthesis worn for many years may facilitate the appearance of this atrophy must be considered. A proposed hypothesis is that the lingual papillae are sensitive to a lack of oxygen and do not regenerate in the normal way if the oxygen supply is impaired —lack of iron, lack of oxygen, lack of riboflavin or lack of nicotinic acid. If this concept is correct, the surface of the tongue may act as an important index of the degree of hydration of the body and as a mirror of the intracellular oxidative processes.

## Nordisk Medicin, Gothenburg

### 25:1-52 (Jan. 5) 1945

Rhinitis. H. Malmros.—p. 1.
Tests of Pancreatic Function in Chronic Disturbances of Pancreas. S. G. Sjöberg.—p. 2.

#### Hospitalstidende

*Liponecrosis of Breast: 3 Cases. J. Dalsgaard.—p. 5.

#### Hygiea

Reliability of Citric Acid Test in Diagnosis of Hepatic Disorders. N. Alwall.—p. 23.
Case of Congenital Myxedema. B. H. Hesselman.—p. 26.

**Liponecrosis of Breast.**—Dalsgaard says that in this disease trauma plays a greater part than in cancer of the breast. The boundaries are less well defined and the growth is usually more mobile. Macroscopically the whitish yellow areas are less irregular in form and do not radiate from the center, as is often the case in cancer of the breast. There is not the tendency to concavity of the cut surface or to development of pinkish transparent bands, as in scirrhus. Excision was done in 3 cases of liponecrosis of the breast. The clinical diagnosis was confirmed microscopically. In 1 case, with preceding trauma, there had not been a recurrence after three years. In the second, with processes in both breasts, one of which was removed, recurrence was not seen after five years and the unremoved tumor had disappeared. The third case was not followed up.

### 25:177-236 (Feb. 2) 1945

#### Hospitalstidende

*Terminal Ileitis. Review and 24 Cases. I. Andersen.—p. 177.
Crural Herniotomy with Description of Plastic Method of Closing Crural Canal. A. Als-Nielsen.—p. 183.
Morel-Lavallée's Traumatic Separation of Skin and Subjacent Layers. J. V. Thorberg.—p. 189.
Investigations on Reaction of Normal Organism to Injection of Colloids in Small Doses. S. Selsø.—p. 192.
Natural Function of Heparin in Animal Organism. P. Astrup.—p. 195.
Two Cases of More Unusual Diseases of Ureter. K. Østerbye.—p. 197.

#### Hygiea

Ileac Invagination—Meckel's Diverticulum. L. Hallström.—p. 201.
Case of Pancoast's Symptom in Initial Tuberculosis. S. Hansson. —p. 203.

**Terminal Ileitis.**—In the acute cases of terminal ileitis the affected intestine is mobile and exhibits hyperemia and edema. The subchronic processes often develop insidiously without an acute initial stage and resemble ulcerative colitis; there may be a combination of acute and chronic changes. The patients may be treated for various intestinal disorders without permanent effect. The transition from the second or colitis stage to the third or stenotic and the fourth or fistulous stage progresses steadily. Diagnosis may be difficult in the subchronic stage but can be made if the condition is borne in mind. Laparotomy is indicated. Prognosis after radical intervention is good. In chronic stenotic cases resection is indicated, but sometimes a shunting operation must suffice. If fistulas are present, radical operation is called for. Of the 24 cases treated since 1938, 13 were acute and were treated operatively, chiefly on the suspicion of acute appendicitis. Follow-up of 7 patients did not indicate persisting disorder. Of the 7 patients with subchronic ileitis, 5 diagnosed roentgenologically were not operated on because of their age; 2 were operated on during a mild attack diagnosed as acute appendicitis. In 1 of the 3 cases of stenotic ileitis resection of the ileum gave good results; in the second, with ileocecal resection and ileocolostomy, death occurred from operative shock; in the third, side-tracking was done. The last case presented recurring abscesses and fistulas which necessitated ileocecal resection. The abscesses and fistulas persist and the prognosis is doubtful.

### 25:237-286 (Feb. 9) 1945. Partial Index

#### Hospitalstidende

Symptomatology in Retroflexion of Uterus and Lines of Treatment. P. N. Damm.—p. 237.
Relation of Upper Urinary Tract After Transurethral Resection. J. C. Christoffersen.—p. 241.
Postoperative Gastrocutaneous Fistulas. V. Aalkjaer.—p. 246.
Two Accessory Bones, Os Subtibiale and Os Subfibulare, in Relation to Malleolar Fractures. D. Trolle.—p. 247.
Clinical Determination of Plasma Protein by Aid of Gradient Method. E. Gudiksen.—p. 249.
Indications for Sterilization of Feebleminded. P. A. Schwalbe-Hansen. —p. 252.
Abdominal Symptoms in Infectious Mononucleosis. S. Thomsen.—p. 254.

#### Finska Läkaresällskapets Handlingar

Experiences in Thoracoplasty in Mjölbollstad Sanatorium. A. P. Heikel. —p. 260.
Occurrence of Night Blindness and Vitamin A Deficiency in Different Disorders. C. E. Nylund.—p. 266.

#### Hygiea

*Behavior in Pregnancy of Women Heterozygous with Respect to Diabetes Insipidus. H. Forssman.—p. 271.
Treatment of Adenosarcoma of Kidney (Wilms's Tumor). S. Berglund. —p. 276.
Suboxemia Tests in Injuries to Brain Stem After Carbon Monoxide Poisoning. H. Nyman.—p. 278.

**Pregnancy in Women Heterozygous with Respect to Diabetes Insipidus.**—Forssman studied three families with hereditary diabetes insipidus. Of 25 living women known to him who are heterozygous with regard to the disease, 10 examined to date show an insufficient urine concentration, ascribed to the tendency to diabetes insipidus. In women with this characteristic a pathologic increase in diuresis may appear in the terminal period of pregnancy. The symptoms disappear, though not completely, on delivery, to reappear, usually intensified, in the next pregnancy. After several pregnancies a mild diabetes insipidus becomes chronic. A parallelism is seen between this phenomenon and the change in the anterior lobe of the pituitary during pregnancy. The increased secretion of urine in certain women toward the end of pregnancy is believed to be due to intensification of the diuretic function of the lobe. The genetic defect in compensatory regulation causes the augmentation of the diuresis to appear in increased form in women heterozygous with respect to diabetes insipidus and constitutes diabetes insipidus of pregnancy.

### 25:287-338 (Feb. 16) 1945. Partial Index

Problem of Otosclerosis. G. Holmgren.—p. 287.
Surgical Treatment of Hyperinsulinism. E. Dahl-Iversen.—p. 290.

#### Hospitalstidende

Prostatic Fibrosis. E. Bandier.—p. 295.
*Postoperative Gastritis. T. Christiansen.—p. 300.
Acidosis in Acute Purulent Otitis Media in Infants. E. Kirk.—p. 309.
Treatment of Tendinous Paronychia with Immobilizing Plaster Bandage. N. F. Gregersen.—p. 313.
Spontaneous Closing of Gastroenterostomy in Hourglass Stomach. M. Olesen.—p. 315.

#### Hygiea

Therapy of Epilepsy. R. Eeg-Olofsson.—p. 317.
Fantom Experiences in Transverse Lesion of Spinal Cord. B. Cronholm.—p. 319.

**Postoperative Gastritis.**—According to Christiansen, postoperative gastritis is characterized by polymorphism. There are superficial, hypertrophic, erosive, atrophic or ulcerous elements. The condition develops independently of free hydrochloric acid or the stoma being able to attain rhythmic contraction. If objective improvement occurs, it affects only the erosive and ulcerative elements; the atrophic and hypertrophic changes appear irreversible. Effective therapy is not known. The most helpful treatment is perhaps a combination of ulcer diet and gastric lavage, but subjective improvement is not always accompanied by objective improvement, and in spite of improvement the gastritis may progress. Postoperative gastritis must be considered one of the gravest disorders of the stomach. The various types are illustrated by 9 cases.

# Book Notices

**All About Feeding Children.** By Milton J. E. Senn, M.D., Associate Attending Pediatrician, New York Hospital, New York, and Phyllis Krafft Newill. Cloth. Price, $2.50. Pp. 269. Garden City, New York: Doubleday, Doran & Company, Inc., 1944.

This book contains not all but what the mother needs to know about what to feed children. It is an authoritative manual on the planning and preparation of menus for children from birth to the age of 12 years. The sections on infant feeding and special formula preparation are excellent. The authors take into consideration the varying nutritional requirements of children as they grow. There are welcome suggestions for lunch boxes and party refreshments and meals for children of all ages. Sufficient discussion of nutrition and the properties of the individual foods is included to enable the mother to select her own menus wisely. All of this fine advice is apt to be discredited by the reader because of the obvious ultra conservatism of the authors in advising "if possible" to hold off candy and chocolate milk until the age of 3, malted milk until the fifth year and pickles, radishes, cucumbers and green pepper until the tenth or twelfth year.

The causes and solutions of feeding problems could fill a separate book. The parents of children who present feeding problems require a thorough understanding of what may be involved in order to cope with such problems successfully. It is important that the parents see the feeding problem in relation to the whole personality and environment of the child. Here emphasis is placed too much on mealtime behavior. Since this is supposed to be a comprehensive book, it would be better to omit this important subject entirely than to give it the sketchy treatment it receives.

**Miastenia Grave.** Por Carlos Virgilio Savoy. Tése de concurso à docência livre de clínica neurologica na Faculdade de medicina da Universidade de S. Paulo. Paper. Pp. 156, with 12 illustrations. São Paulo, 1945.

Since the work of Walker in 1934, when the effects of neostigmine (prostigmine) on the symptoms of myasthenia gravis were reported, there has been growing interest in this disease and considerable research has been undertaken both in the clinic and in the laboratory. The results are now appearing in the medical literature. The book under review is the second monograph on the disease published since 1944. Both emanate from South America. The first, by A. R. Goni, contains histories of 13 cases observed in Buenos Aires from 1937 to 1944. The book by Savoy reports observations on 8 cases observed at São Paulo, Brazil, and, in the form of a thesis, the history of myasthenia gravis is reviewed and recognition taken of the work done particularly since 1934 in the United States and elsewhere. The monograph is a careful and extensive report on our knowledge of the disease up to the present time, and, except for a few omissions, most of the recent investigations are reported. There are illustrations of barium retention in the pharynx, pneumograms showing the effect of neostigmine, ergograms and photographs of a patient with associated and adiposogenital syndrome. The book will be of particular interest to neurologists but should appeal to the medical profession in general, for it deals with a disease now widely recognized and amenable to special supportive treatment with neostigmine and other drugs.

**Trauma of the Central Nervous System.** Proceedings of the Association December 17 and 18, 1943, New York. Editorial Board: Jefferson Browder, M.D., Chairman, Abraham Max Rabiner, M.D., and Fred A. Mettler, M.D., Ph.D. Research Publications, Association for Research in Nervous and Mental Disease, Volume XXIV. Cloth. Price, $8. Pp. 679, with 243 illustrations. Baltimore: Williams & Wilkins Company, 1945.

This publication contains the proceedings of the Association for Research in Nervous and Mental Disease which took place on Dec. 17-18, 1943. Forty-five investigators or authorities in the fields of neurology, neuropathology, neuropsychiatry or neurosurgery have contributed. There is some overlapping between certain of the chapters, but this is not serious as an equivalent gain results from the expression of the points of view of qualified persons about several borderline problems. This book is a creditable addition to the lengthening list of research publications in nervous and mental disease which have been appearing since 1920.

**Das Herz beim Scharlach.** Von Privat-Dozent Dr. med. Bernhard Steinmann, Sekundärarzt der Medizinischen Universitätsklinik, Bern. Cloth. Price, 12.80 Swiss francs. Pp. 149, with 21 illustrations. Berne: Hans Huber, 1945.

This monograph is based on clinical, electrocardiographic and radiologic observations on the heart in 350 cases of scarlet fever. The results are analyzed in the light of the literature on cardiac disturbances in scarlet fever and on their relations particularly to rheumatic fever and to focal infections. By means of electrocardiographic studies an early myocarditis without definite clinical signs is separated from a more serious carditis in the second to the fourth week of the attack. This late carditis occurs especially in older children. The intramuscular injection of Dick toxin in rabbits was found to cause disturbances of myocardial function similar to those in early scarlatinal myocarditis. The relations of late myocarditis to different factors and complications are discussed, particularly its similarities to rheumatic carditis. The structural features, the streptococcus etiology and the nosologic relations of the two infections as well as the role of allergy in the genesis of the rheumatic processes are considered. The conclusion is reached that scarlatinal and rheumatic carditis are not identical. The book is an important contribution to the study of the disturbances of the heart in scarlet fever and of related problems.

**Annual Review of Biochemistry.** James Murray Luck, Editor. James H. C. Smith, Associate Editor. Volume XIV. Cloth. Pp. 856. Stanford University P. O., California: Annual Reviews, Inc., 1945.

This volume is in continuation of an excellent series of reviews which are of value in aiding the biologic scientist to keep abreast of rapid changes and advances. The subject matter is presented in chapters on biologic oxidations and reductions; enzymes that hydrolyze the carbon-nitrogen bond; proteinases, peptidases and amidases; nonproteolytic, nonoxidative enzymes; the chemistry of the carbohydrates, of the lipids, of the amino acids and proteins, of the nucleic acids and nucleoproteins, of the steroids, of the hormones, of the triterpenes and of antibiotic substances other than penicillin; x-ray studies on compounds of biochemical interest; the chemistry and metabolism of the compounds of sulfur, of the compounds of phosphorus and of bacteria; carbohydrate, fat and mineral metabolism; the metabolism of proteins and amino acids; nutrition; water soluble vitamins; fat soluble vitamins; animal pigments; detoxication mechanisms; the biochemistry or malignant tissues; nitrogenous constituents of plants; biologic nitrogen fixation, and the mineral nutrition of plants.

**How a Baby Grows: A Story in Pictures.** By Arnold Gesell, M.D., Director of the Clinic of Child Development, Yale University, New Haven, Conn. Over 800 Photographs Arranged and Interpreted with the Assistance of Katherine Gesell Walden, A.B. Cloth. Price, $2. Pp. 83. New York & London: Harper & Brothers, 1945.

The hundreds of photographs in this book show the growing mind and developing personality of the child as revealed in his early activities. The pictures are uniquely arranged to portray evidences of growth which shape the baby's behavior as he advances. Gradual changes and their portent are clearly demonstrated by interval pictures of the same subject. Each view is so typical that one can match it with a personal recollection. The text is brief but amply explanatory. The author sums up his revelations with principles rather than rules for guidance. His constant plea, reiterated in his closing word to parents, is to treat each child as an individual and to help him develop his own personality and potentialities. Parents will enjoy this book and find it helpful to them in understanding and guiding their children. It shows, more vividly than any written description, when, where and how guidance and discipline should begin.

**Quelques vérités premières (ou soi-disant telles) sur la transfusion sanguine.** Par Arnault Tzanck et Marcel Bessis. Paper. Price, 80 fr. Pp. 66. Paris: Masson & Cie, 1945.

This is the most recent number in a collection of similar booklets on various topics of medical interest. It covers the practical aspects of blood grouping and transfusion under different conditions. Its distinctive feature is a statement of the essential facts concerning these matters in plain, terse, well worded maxims. The principles and methods appear to be practically the same as ours.

# Queries and Minor Notes

THE ANSWERS HERE PUBLISHED HAVE BEEN PREPARED BY COMPETENT AUTHORITIES. THEY DO NOT, HOWEVER, REPRESENT THE OPINIONS OF ANY OFFICIAL BODIES UNLESS SPECIFICALLY STATED IN THE REPLY. ANONYMOUS COMMUNICATIONS AND QUERIES ON POSTAL CARDS WILL NOT BE NOTICED. EVERY LETTER MUST CONTAIN THE WRITER'S NAME AND ADDRESS, BUT THESE WILL BE OMITTED ON REQUEST.

## MULTIPLE SCLEROSIS

*To the Editor:*—**Is there anything new in the treatment of multiple sclerosis? Has any work been done on using penicillin in this condition? A man aged 35, who has been to several clinics, has been diagnosed as having this condition. His illness dates back eleven years. He is now complaining chiefly of the spasticity of the lower extremities, which, as he describes it, causes a feeling of severe pull on the lower spine or back. This is present only when standing; when he is lying down the legs feel free and do not present signs of spasticity and are freely movable. Does climate have any effect on multiple sclerosis? Our New England fall and winter elicit more complaints. I cannot help but feel that our cold and damp weather is bad.**

**Theodore P. Murphy, M.D., Montpelier, Vt.**

ANSWER.—There would seem to be some reasonable doubt with regard to the diagnosis of the case described. Spastic paralysis of the legs is the most common defect in multiple sclerosis, for impingement of a sclerotic plaque on the corticospinal or pyramidal tracts, extending from the motor cortex to the caudal end of the spinal cord, is almost a certainty, especially if the illness has lasted eleven years. Spasticity, however, is not usually accompanied by "a feeling of severe pull on the lower spine or back" and would never be absent when lying down and present only when standing. Such a change in posture would not affect the deep leg reflexes, which must, in spastic states, be exaggerated, often with the addition of ankle clonus and positive Babinski signs. Without such reflex changes, in part or total, spasticity cannot be shown in the leg muscles. The word "spasticity," moreover, is frequently used loosely, but there is a long standing connotation which limits the use of the word, in describing one type of muscular weakness, to states resulting from a release of the normal inhibition exerted by the corticospinal neuron. Such a condition is due to interference with the impulses passing down this long and important pathway of the central nervous system.

The effect of penicillin on multiple sclerosis is at present undetermined. A few patients may have received it, but reports on its use are not part of the current literature. For a demyelinating disease, such as multiple sclerosis, penicillin treatment would not appear to be effective and, as has often been pointed out, few diseases offer a more hazardous task of therapeutic evaluation than does multiple sclerosis, with its sharp swings from remission to relapse without obvious cause.

Some authors (Freeman) have favored a mild climate for patients with multiple sclerosis. Certainly upper respiratory infections make the disease more difficult to bear. That they actually make the disease worse is less certain. Rest, preferably in bed, during an acute exacerbation is the treatment of choice until some more specific remedy is at hand. Bed rest appears to be often neglected. Vitamins may be added, but their value is uncertain.

Morel has continued the use of magnesium ferriscorbone, a combination of ascorbic acid and iron compound, in the treatment of multiple sclerosis. He reported his initial experiments in 1936, and another report was published in 1942. The treatment is based on the assumption that magnesium may inhibit the destruction of the phospholipids in the myelin and the nucleoproteins in the gray substance. A similar substance with a sodium radical has been used in the treatment of acetonuria in diabetes. Morel gave the drug by intravenous injections. This paper reports observations on 1 case and therefore must be considered as a preliminary report of an unconfirmed form of treatment.

Chavany summarizes the treatment of multiple sclerosis and points out that there is no specific treatment for this disease. The cause is not known; the pathology is not clearly understood; the reason for progression by spontaneous remissions and relapses is not adequately explained. Many drugs are in current use, including the intravenous use of sodium salicylate as advocated by Foix and Levy, mercuric cyanide intravenously, multiple vitamins and the method of fever treatment based on injection of vaccines as advocated by Vincent and Krebs. In each case the results are inconclusive. A combination of fever therapy and vitamins appears to give the best result, but Chavany feels that no form of treatment advocated is sufficiently stabilized to be widely accepted.

Another form of treatment is the use of blood serum obtained from a patient in a stage of remission. Advocated by Laignel-Lavastine and Korressios in 1938, it has been repeatedly tried since that date. In the hands of Carballo and his associates in Madrid the results were equivocal.

Benedek and Horanyi-Hechst treated a severe case of multiple sclerosis in which many symptoms had existed for at least five years, including transient attacks of blindness, urinary incontinence, speech difficulty and particularly pathologic laughing. Twenty-five cc. of air instilled into the ventricles resulted in immediate relief of laughing which lasted for a two months period of observation. On theoretical grounds it was felt that the instillation of air changed the vascular supply of the hypothalamic structures surrounding the third ventricle, the presumed site of pathologic laughing in association with the cortex, thalamus and brain stem.

References:

Freeman, Walter: Frontiers of Multiple Sclerosis: Pneumoencephalography, Electroencephalography, Morbid Anatomy and Pathogenesis, *M. Ann. District of Columbia* **13**: 1 (Jan.) 1944; Treatment of Multiple Sclerosis, with Special Reference to Fever Therapy, Prolonged Rest and Climatotherapy, *ibid.* **13**: 58 (Feb.) 1944.

Morel, A.; Arloing, F., and Josserand, A.: Observation d'un cas de sclérose en plaques traitée par la ferriscorbone magnésienne, *Lyon méd.* **24**: 161 (Feb. and March) 1942.

Chavany, J. A.: Le traitement de la sclérose en plaques, *Progrès méd.* **70**: 227 (May 10) 1942.

Carballo, J. R.; Arjona, E., and Clavel, F.: Tratamiento de la esclerosis en placas con suero hemolitico, *Rev. clin. espan.* **12**: 240 (Feb. 29) 1944.

Laignel-Lavastine, M., and Koressios, N. T.: La serothérapie hémolytique sur la sclérose en plaques, Paris, Maloine, 1938.

Pette, H.: Die akut entzündliche Erkrankungen des Nervensystems, Leipzig: Thieme, 1942.

Schaltenbrand, G.: Die multiple Sklerose des Menschen, Leipzig, Thieme, 1943.

Benedek, L., and Horanyi-Hechst, B.: Die Wirkung der Lufteinblasung auf das Zwangslachen bei einem Fall von multipler Sklerose, *Psychiat.-neurol. Wschnr.* **48**: 377 (Nov. 28) 1942.

## ASPHYXIA OF THE NEWBORN

*To the Editor:*—**How is carbon dioxide or plain oxygen used in asphyxia of the newborn? What is the value of nikethamide and other stimulants? Our interns come from various schools with ideas as to what to do and feel that we are old fashioned in using carbon dioxide when the babies are already cyanotic.**

**M.D., Kansas.**

ANSWER.—The treatment of asphyxia of the newborn, in the absence of anemia, should have three objectives. The first objective is to make certain that the airway is not obstructed. The second objective is to oxygenate the blood in order to support the heart and to prevent anoxic injury of the cells of the cerebral cortex. The third objective is to initiate spontaneous and adequate respiratory movements. The more quickly the first two objectives are attained by any harmless method, the better for the patient. If the blood can be kept oxygenated by artificial means, the initiation of spontaneous and adequate respiratory movements is of secondary importance from the point of view of the most immediate vital need, namely oxygenated blood.

What are the reasons for mixing carbon dioxide with oxygen for the treatment of asphyxia? First, carbon dioxide is a respiratory stimulant: this is agreed to by every one. Pronounced anoxia depresses the respiratory center, and hence it is argued that carbon dioxide should be used to stimulate the depressed respiratory center. Second, carbon dioxide increases the depth of inspiration and relieves or tends to relieve atelectasis and to prevent the development of pneumonia. The entrance of air or gas into the pulmonary alveoli of the newborn changes the epithelium from a cylindric to a flattened form. It would appear that several deep inspirations would open more alveoli and flatten their epithelium than many shallow inspirations. It has not been established, however, that a deep inspiration excited by the inhalation of carbon dioxide is more effective and less harmful potentially than mechanical insufflation with 100 per cent oxygen. Third, carbon dioxide is claimed to increase venous return to the right side of the heart by increasing venopressor tone and thus to improve the circulation. This claim has not been established, though a deep inspiration does favor venous return. On the contrary, it has been claimed that in anoxemia due to obstruction and depression of the respiratory center there is already an excess of carbon dioxide in the blood and tissues and that the addition of more is irrational and likely to produce injury and "overstrain" the heart. This claim has not been clearly established. Fourth, carbon dioxide in oxygen increases the rate of dissociation of carbon monoxide from hemoglobin in carbon monoxide asphyxia. This is quite well established. Whether 7 per cent carbogen (7 per cent carbon dioxide plus 93 per cent oxygen) is superior to 100 per cent oxygen in regard to the end results (survivals and neurologic sequelae) of the treatment of carbon monoxide asphyxia is at present debatable.

Thus there is no argument regarding the advisability of the use of 100 per cent oxygen in asphyxia neonatorum. It should

be used with manual or mechanical artificial respiration. If the blood becomes red the primary objective has been attained; then the condition of the respiratory center can be considered. If 100 per cent oxygen is given by endotracheal intubation under intermittent pressure and the blood does not become red, a veno-arterial shunt or massive pneumonia is present. If after the blood has been fully oxygenated for several minutes respiration does not occur spontaneously when artificial respiration is stopped and cyanosis recurs, then the presence of cerebral trauma or deep anesthesia of the respiratory center should be suspected. Excessive carbon dioxide is removed from the blood and tissues after complete oxygenation of the blood has been maintained for five or ten minutes. At this point 5 or 7 per cent carbogen can be administered for a minute or two. If this procedure is followed, all of the criticisms previously mentioned can be avoided except the report that carbon dioxide in oxygen increases intracranial pressure (W. F. Von Oettingen, Public Health Bull. 290).

The differences of opinion in the obstetric services in our sixty-three medical schools regarding the use of carbon dioxide and stimulants in asphyxia neonatorum have been summarized by Dr. P. J. Flagg in his book "The Art of Resuscitation" (New York, Reinhold Publishing Corporation, 1944). Ten of the sixty-three voiced objection to the use of carbon dioxide; the remainder either approved or did not voice objection. Of fourteen services which wrote of their experience with drugs, nine were favorable and five were unfavorable to the use of alpha lobeline or nikethamide.

## NERVE CRUSHING PROCEDURE FOR POLIOMYELITIS

***To the Editor:***—**The Department of Health, Troy, Ohio, recently received an inquiry concerning the Billig-van Harreveld procedure for treatment of residual paralysis from poliomyelitis. Our department, as well as our local chapter of the National Foundation for Infantile Paralysis, would like the following information: 1. What does this treatment consist of, and how effective is it? 2. Is it an ethical and recognized procedure? 3. Is the institution offering it an ethical, reputable and recognized institution? 4. Would we be justified in referring cases to this institution and recommending payment for this type of treatment from our local poliomyelitis foundation?**

**Harry Wain, M.D., Troy, Ohio.**

Answer.—1. The Billig-van Harreveld procedure consists of a manual operation to interrupt the remaining intact motor nerve fibers of a paretic muscle. Its success supposedly depends on the tendency of such nerves to branch during regeneration, thereby providing an increase in the number of nerve fibrils available for muscle cells. The operative procedure is followed by intensive physical therapy and muscle reeducation. The procedure is commonly known as the "nerve crushing" operation. There is of course no assurance that improvement will result and no way of anticipating to what extent such improvement as does occur may develop. The reported results in over 800 cases appear to be hopeful.

2 and 3. This procedure is still in the experimental stage. It is carried out by well recognized, qualified surgeons at the St. Luke's and Children's Medical Center, Philadelphia, in cooperation with the University of Pennsylvania Department of Physical Medicine. These institutions are, of course, ethical, reputable and of high medical standing.

4. Since this procedure is carried out by duly licensed physicians in accredited hospitals there is no reason why cases should not be referred for the treatment. The local chapter of the National Foundation for Infantile Paralysis should determine through its own advisers the method of payment.

## HISTAMINE FOR MIGRAINE

***To the Editor:***—**I am anxious to obtain some information on the use of histamine in the treatment of migraine, with detailed method of use.**

**George B. Ribble, Comdr. (MC), Glenview, Ill.**

Answer.—A specific cure for migraine has not yet been announced. There is evidence to indicate that histamine may be of value in alleviating the syndrome to some extent for variable periods of time. Not all patients who have migraine respond to histamine, and, of those who do, not all derive the same degree of benefit. It would appear as if the effect of histamine on the migrainous mechanism is a relatively transient one. It is of little or no value in aborting acute episodes of migraine, and it is used chiefly with the idea of preventing further attacks.

Histamine can be administered in desensitizing doses by the subcutaneous route or by the intravenous route. A combination of the two procedures seems more effective in preventing future attacks than does either procedure when carried out alone.

More work will have to be done in this field before definite conclusions can be drawn with reference to histamine in the treatment of migraine.

The nervous tension state is often so intermingled with the migraine problem that it is difficult to determine whether one is dealing with migraine per se or not. Consequently it is not easy to evaluate a therapeutic agent which is used with the idea either of aborting acute attacks or of preventing future attacks.

The following is a partial list of publications referring to the treatment of migraine with histamine:

Butler, Stuyvesant, and Thomas, W. A.: Intravenous Histamine in the Treatment of Migraine: Preliminary Observations, The Journal, May 19, 1945, p. 173.

Horton, B. T.: The Use of Histamine in the Treatment of Specific Types of Headaches, *ibid.*, Feb. 1, 1941, p. 377.

Horton, B. T.: Symposium: Head and Face Pain; Medicine, *Tr. Am. Acad. Ophth.* **49:** 23 (Sept.-Oct.) 1944.

Levin, I. A.: Migraine and Histamine Headaches, *J. Louisiana State Univ. School Med.* **3:** 10 (Aug.) 1942.

Lieder, L. E.: Histaminic Cephalalgia and Migraine, *Ann. Int. Med.* **20:** 752 (May) 1944.

## PSEUDOTUBERCULOSIS IN LABORATORY ANIMALS

***To the Editor:***—**Some of my guinea pigs are dying from a condition which is generally called pseudotuberculosis. How can I get rid of this epidemic without destroying all the animals and starting with new animals after a thorough disinfection?**

**Stephan Epstein, M.D., Marshfield, Wis.**

Answer.—Pseudotuberculosis is a widespread infectious disease of rabbits and guinea pigs caused by a gram negative, nonmotile, short or coccoid form of bacillus belonging to the hemorrhagic septicemia group. The micro-organism is most often referred to as Bacillus pseudotuberculosis rodentium of Pfeiffer or of Nocard and Preisz. The bacillus is readily stained by aniline dyes and its body often takes up the stain unequally. Serologically it resembles Pasteurella pestis most closely, from which it is often differentiated with difficulty. Cows, horses, monkeys and even man also may be affected. The bacteria are widespread in nature and are encountered in the soil and elsewhere. They are usually saprophytic and only under certain unknown conditions of the host do they become pathogenic. The natural mode of infection is by way of the alimentary tract, as evidenced by the common occurrence of lesions in the intestine and the mesenteric lymph nodes. Affected animals eliminate the bacteria in the feces, and animals can be artificially infected by ingestion. The disease is characterized by the appearance of numerous yellowish nodules in various organs. The appendix and ileocecal junction of rabbits are a frequent site of localization. The mesenteric nodes, the liver and the spleen are often affected. The lung is less often involved. Histologically the lesions consist of circumscribed nodules of mononuclears intermixed with a great many polymorphonuclears. The center of the lesion usually is occupied by necrotic cells and nuclear débris. On the periphery of the nodule there is a considerable proliferation of granulation tissue. The center of such encapsulated lesions is often transformed into a thin pus, where the bacilli may be found in small clumps. Epithelioid and giant cells are rare, and in this respect the lesions differ most sharply from those of true tuberculosis; nor is calcification encountered in pseudotuberculosis. Agglutinins appear in infected animals. Recently Ramon has obtained a toxin from this bacillus which is lethal to rabbits. He has also prepared a toxoid. He demonstrated that animals immunized with this toxoid or with solution of formaldehyde and heat-treated bacteria, by repeated subcutaneous inoculation, can be protected against virulent bacteria fatal for normal rabbits. There is as yet no confirmation of Ramon's studies.

For the present, the prevention of the disease must depend chiefly on prophylaxis. It is most important that animals be protected from contact with their own feces. This may be achieved by frequent sterilization of the cages with hot steam, the installation of wire mesh bottoms in the cages where the animals are housed and the provision of drinking bottles so arranged that the water cannot become contaminated by the excreta of the animals. These hygienic measures, together with the maintenance of an adequate diet, will largely eliminate the infection.

## SUFFOCATION AND BLOOD CARBON MONOXIDE

***To the Editor:***—**To the query about "Suffocation and Blood Carbon Monoxide" (The Journal, Dec. 29, 1945, p. 1295) I would like to add the following: It is known that carbon monoxide hemoglobin can be found in exhumed bodies. I reported a case in which I could discover carbon monoxide hemoglobin in the bloody transudate which was present in the chest cavity of a man who had died from acute carbon monoxide poisoning, three months after his death. The body had not been embalmed, however. The case is reported as "Beobachtungen bei Exhumierungen" (observations at exhumations) in the *Aerztliche Sachverständigen-Zeitung* 34: 241 (Aug. 15) 1928. This case and similar ones prove that carbon monoxide hemoglobin disappears slowly from the body, probably only when the blood and tissues are destroyed by advanced putrefaction and decomposition.**

**George S. Strassmann, M.D., Waltham, Mass.**